WILLICH'S

POPULAR TABLES

NINTH EDITION.

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POPULAR TABLES

ARRANGED IN A NEW FORM,

GIVING INFORMATION AT SIGHT FOR ASCERTAINING,

ACCORDING TO THE

CARLISLE TABLE OF MORTALITY,

THE

VALUE OF LIFEHOLD, LEASEHOLD,

AND

CHURCH PROPERTY,

RENEWAL FINES, &c.,

THE PUBLIC FUNDS,

Annual Average Price, and Interest on Consols, from 1731 to 1850.

ALSO

VARIOUS INTERESTING AND USEFUL TABLES,

EQUALLY ADAPTED TO

THE OFFICE AND THE LIBRARY TABLE.

BY CHARLES M. WILLICH,

LATE ACTUARY AND SECRETARY TO THE UNIVERSITY LIFE ASSURANCE SOCIETY.

NINTH EDITION.

EDITED BY

MONTAGUE MARRIOTT,

BARRISTER-AT-LAW.

LONDON:

LONGMANS, GREEN, READER, AND DYER.

MDCCCLXXI.

PREFACE TO THE SEVENTH EDITION.

A new Edition of these Tables being called for, I have endeavoured to render it worthy of the support which previous issues have received.

Table VIII., showing Prices of Consols, Rates of Interest, with interesting and important facts affecting Monetary operations, has been brought down to the present day. (*See* p. 92b.)

The Table of Discounts, Notes, Bullion, &c., has been continued to the last change in the Bank Rate (*See* p. 179b.)

So many alterations have occurred in the coins and systems of account of various nations, that it has been found necessary to construct an entirely new Table from the latest authorities. (*See* p. 95.)

I have also added a Table of Equivalents under the new system of Chemical Nomenclature, still retaining that published in 1861 in the Fifth Edition. (*See* p. 103a.)

Montague Marriott.

26, Montpelier Square, S.W.
March, 1871.

PREFACE TO THE FIFTH EDITION.

The last issue of these Tables, published in 1858, having been out of print for some time, I much regret the delay which has unavoidably occurred in preparing the present carefully revised and enlarged Edition.

I beg to state that Table VIII., showing the Average price of Consols and the Average Rate of Interest, together with many important facts from the year 1731, has been continued up to the present time. (*See* p. 92a.)

To the Chemical Tables (XVII.) I have added 61 Elementary Substances with their Equivalents, Symbols, and Classification. (*See* p. 103a.)

Many additions have also been made to the Astronomical Tables. Up to the present time 65 Asteroids have been discovered, and the elements of 62 are included. (*See* p. 149.)

The Table of Bank Discounts, showing the amount of Notes issued and Stock of Bullion, with the Minimum rate of Discount, has been continued up to the 11th April, 1861. At the present time this Table will be found interesting, as it contains all the changes which have taken place since the 31st August, 1844. (*See* p. 173a.)

Charles M. Willich.

25, Suffolk Street, Pall Mall, S.W.
April, 1861.

PREFACE TO THE FOURTH EDITION.

The present Edition contains a variety of new Tables, which I trust may be accepted as an excuse for the long delay which has occurred—the last Edition having been out of print in 1856.

INVESTMENT OF CAPITAL.

The most important to the man of business are New Tables IV., VI., and VII., which show the prices which may be paid for property depending on the Duration of Life, so that the purchaser may receive a *certain* high rate of interest on the Capital invested, while the re-investments to replace Capital are calculated, on an average, to be made at 3 per Cent. It may be unnecessary to point out to a purchaser of annuities, whether depending on life, or for a fixed term of years, the great advantage it is to be enabled to ascertain, *at sight*, what the price should be, so that he may enjoy 5 or 6 per Cent., according to the description of property purchased, and to know that the price paid will afford him that interest, should the re-investments to replace Capital be made at not less than 3 per Cent. I incline to the opinion that, if we take all circumstances into consideration, a purchaser cannot safely calculate on a greater average rate.

By the Formula given in my paper read before the British

ASSOCIATION,* in 1857, questions, not resolvable by the Tables inserted in this Volume, may be readily calculated. The Formula is equally applicable to various rates of interest, and to Annuities for Terms of Years certain, or Annuities for Joint Lives, or the Longest of Two Lives, &c. TABLE XV., in the first Edition of this Work, for which I was indebted to the courtesy of MR. PETER HARDY, has a similar object in view with reference to Property for Terms of Years certain, and is a particular case of the general Formula referred to, and may be constructed by it.

EXPECTATION OF LIFE.—LAW OF MORTALITY.

For several years my attention has been directed to the subject of an approximation to a Law of Mortality. In 1857 I submitted to the Meeting of the BRITISH ASSOCIATION† a paper, proposing a simple Formula for determining the expectation of life between the ages of 5 and 60, viz.:

If a = the age,

Then $\frac{2}{3}(81\frac{1}{2} - a)$ = Expectation, or years of after life-time.

The results obtained by the use of this Formula correspond very nearly, for a lengthened period, with the expectation deduced from the CARLISLE Table of Mortality.

The ENGLISH LIFE TABLE (Males) having been adopted by DR. FARR in the Twelfth Report of the Registrar-General, and finding the differences between it and the CARLISLE Table of Mortality were very uniform, I adopted the following Hypothesis, viz.:

If a = the age,

Then $\frac{2}{3}(80 - a)$ = Expectation.

This Hypothesis, as will be seen at page 178, gives the Expectation of Life corresponding very nearly with that calculated by DR. FARR from the returns obtained from every parish in England and

* See Note (No. 1) page 175. † See Note (No. 2) page 176.

Wales. It will be observed that the Expectation of Life, according to the English Life Table (Males), is not so favourable, by about half-a-year, as that obtained by the use of the CARLISLE Table of Mortality.

BANK DISCOUNTS.

The change which takes place in the value of money is of the highest importance, as it affects all the transactions of the world. I have therefore prepared a Statement derived from many authentic sources, embracing the last 14 years from 1844 to 1858. This Table includes the various rates of Discount adopted by the Bank of England,* and on each of the respective dates, the amount of Bank Notes issued or in reserve, with the amount of Bullion held, and the price of 3 per Cent. Stock on that particular day. I have also added the average price of wheat in each year. This Table presents at one view the progress of the Money Market during 14 years, and how it was affected by the Panics, the War with Russia, and the Indian Mutiny.

ASTRONOMY.

The large accession to the family of the ASTEROIDS, now numbering 56, has obliged me to make considerable additions, and I have endeavoured to tabulate the Elements up to the latest period. One page has been devoted to the MOON and the SATELLITES of the other Planets.

I have great pleasure in recording my gratitude to MR. JOHN COUCH ADAMS for the important aid he has continued to give me in

* On 28 April, 1859, the Bank of England raised the Discount to 3½ per cent.

Bullion held	£17,640,342
Bank Notes held by Public . . .	21,938,625
Ditto in Reserve . . .	9,496,645

On the same day Consols, in consequence of the War Panic, opened at 88½ and closed at 89¾.

this portion of the Work, and the kind manner in which he has allowed me to submit the proof sheets of these Tables for his revision.

QUADRATURE OF THE CIRCLE.

The possibility of Squaring the Circle has doubtless occupied the thoughts of most students in Geometry. The problem never has, and probably never will be solved; but a very near approximation to the truth may be obtained. At page 180 is inserted a Copy of the Diagram which Professor Stokes did me the honour to lay before the Royal Society on 10th May, 1855. The error, as will be seen, little exceeds the four-thousandth part of the side of the square sought, and consequently in the Diagram is an invisible point. This *geometrical* approximation is, I believe, nearer the truth than any yet recorded, and it has also the merit of a very simple construction.

Among the ADDITIONAL TABLES will be found some useful to the Student, and occasionally for reference to the Scientific man, viz.:

TABLE **E.** Length of CHORDS, Radius = 10,000, from **1**° to **90**°, and for which Table I am indebted to M. FRANCŒUR.

TABLE **F.** The AREA and DIAGONAL of SQUARES, the sides being from **1** to **100.** This Table has been re-calculated to 12 places of decimals.

TABLE **G.** The DIAMETER, SOLIDITY, and SUPERFICIES of SPHERES, from **1** to **100.** This Table has also been re-calculated to 9 places of decimals.

CHARLES M. WILLICH.

25, Suffolk Street, Pall Mall, S.W.
May, 1859.

PREFACE TO THE THIRD EDITION.

So short a time having elapsed since the publication of these Tables in August last, the call for a *Third Edition* has afforded me much gratification.

To the present Edition is added a variety of Tables of general interest. In the TABLE OF CONTENTS will be found a List under the head of ADDITIONAL TABLES.

HYPERBOLIC LOGARITHMS (Table **A**) are occasionally required by the Student and the Philosopher. I have therefore given the LOGS. of **1** to **1200**, and have extended the Method proposed in the *First Edition* with reference to COMMON LOGS. to the HYPERBOLIC. The LOGS. of high numbers may thus be obtained without difficulty, by the aid of the few pages inserted.

Various Tables useful in TRIGONOMETRY have been added, and the arrangement adopted by showing side by side both the NATURAL NUMBER and the LOG. will, I trust, be found convenient both to the Student and the Practical Man.

The great progress which has been made during the last few years in adding new members to the family of the SOLAR SYSTEM, has induced me to endeavour to bring into one view a considerable portion of the knowledge we possess on the subject.

I have availed myself largely of the information given by the French '**Bureau des Longitudes**,' in the '**Annuaire**' for 1853, and I feel both pride and pleasure in acknowledging my deep obligation to that distinguished Astronomer, Mr. John Couch Adams, the English discoverer of the Planet Neptune, for the valuable information he has kindly communicated to me on various points of great interest and importance, and which I have incorporated into Table F at pages 151, 152, and 153.*

At Page 174, a Table is inserted of Comparative Dates from the time of the Creation. As there appears to be some discrepancy in modern Works which allude to Chinese Chronology, varying with the authority followed, I will endeavour, briefly, to place before the reader some of the statements made by different Authors.

In De Guignes' '*Histoire Général des Huns*,' 1756, the 1st year of the first Chinese Cycle is stated to be 2697 B.C.

The Pere Gaubil, in his '*Traité de la Chronologie Chinoise*,' published by Silvestre de Sacy in 1814, states at page 8, that the first year of Hwang-Te was 2698 B.C.

Freret, in '*Mém. Acad. des. Inscriptions*,' v. xviii. p. 250, assumes the 1st year of the Chinese Cycle to be the 1st year of Hwang-Te, and from certain astronomical phenomena determines that that year must have been 2205 B.C.

The Author of '*L'Art de Vérifier les Dates*' states 2397 B.C. as the 1st year of the first Chinese Cycle.

Du Halde, in '*Description of the Empire of China*,' v. i. p. 143, of translation, 1738, states that Yaou ascended the Throne 2357 B.C. in the 41st year of the preceding Cycle, which from the context was the VIth. There does not appear to be any authority to sanction Du Halde in placing the commencement of the first Chinese Cycle at the 20th year of the reign of Yaou.

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* In this Edition, Table I, pages 149 to 153.

LUDEWIG IDELER, in the '*Mem. of the Berlin Acad.*' 1839, places the 1st year of YAOU 2357 B.C., and in the 41st of the VIth Cycle.

JOHN WILLIAMS, in the '*Numismatic Chronicle,*' v. xiv. p. 169, has ascertained by a comparison of two Chinese Authorities with DU HALDE, that according to the *mean*, the first year of YAOU was 2351 B.C., and the year ONE of the first Chinese Cycle was 2692 B.C.

After the closest investigation which I have been enabled to make, I do not feel it necessary to alter the date given by DE GUIGNES as the year ONE of the FIRST CHINESE CYCLE, viz. 2697 B.C., and therefore that year is the basis adopted in the TABLE of CHRONOLOGY.

The following comparative Table which I have abridged from one far more extensive, given by Sir John Herschel in his '*Outlines of Astronomy*,' showing the exact commencement of the different Eras compared with the Julian Period, may prove of some interest to the reader of history, as well as to the Student in Astronomy.

Julian Epochs.	*Julian Dates.*			*Julian Period.*
Julian Period, commenced	1 Jan.	B.C.	4713	1
Creation of the World (*Usher*)	1 Jan.	,,	4004	710
Olympiads (*mean Epoch in general use*) . . .	1 July	,,	3938	776
Building of Rome (*Varronian Epoch U. C.*) .	22 April,	,,	753	3961
Era of Nabonassar	26 Feb.	,,	747	3967
Era of Seleucidæ	1 Oct.	,,	312	4402
Vulgar or Dionysian Era	29 Aug.	A.D.	1	4714
Hejirah (*Astronomical Epoch, New Moon*) . .	15 July,	,,	622	5335
Era of Yezdejird	16 June,	,,	622	5335
Last day of Old Style (*Roman Catholic Nations*)	4 Oct.	,,	1582	6295
Last day of Old Style in England	2 Sept.	,,	1752	6465
Gregorian Epochs.	*Gregorian Dates.*			
New Style in Roman Catholic Nations . . .	15 Oct.	,,	1582	6295
Ditto in England	14 Sept.	,,	1752	6465
Commencement of 19th Century	1 Jan.	,,	1801	6514
Epoch Catalogue of the British Association .	1 Jan.	,,	1850	6563*

* These 6563 Julian years contain 2,396,759 days. HERSCHEL states that the value of a Tropical year is 365·24224 days, and that by an extension and emendation of the GREGORIAN Rule 100,000 years will contain 36,524,225 days, differing only one day from 100,000 real tropical years, such as they exist at present.

By the kind permission of the Hon. BARON ALDERSON, I have inserted a very curious Table (see G, page 154)* for the Easy EXTRACTION of the ROOTS of PERFECT CUBE NUMBERS not exceeding nine Digits. By means of this Table, or some equivalent, the *American Calculating Boy* was probably enabled to extract the Cube Roots of Numbers within the above limits, almost instantly, and apparently by a mere mental operation.

CHARLES M. WILLICH.

25, Suffolk Street, Pall Mall,
June, 1853.

* In this Edition, TABLE J, p. 155.

PREFACE TO THE FIRST EDITION.

In conformity with the opinion now generally entertained, and in which I fully concur, I have adopted, in the following Calculations, the Carlisle Table of Mortality, which gives a nearer approximation to the actual duration of human life than the Northampton, or any other Table hitherto in use.

In addition to Table XXVIII., for the Renewal of One Life in a Lease originally granted for Three Lives, I have, at the instance of several Stewards of Manors, calculated a Table (XXIX.) to show the Fine payable for the Renewal of Two Lives in a similar Lease. The want of such a Table has long been felt.

I have adopted a novel mode of arrangement in the greater part of the Tables, by which means, I trust, they will be rendered more generally convenient. By the same figures, both the Number of Years' Purchase and the Present Worth of £100 a year are shown; thus affording, *at sight*, a correct idea of the Value.

Table XV. will be found valuable by those who wish to enjoy a certain high rate of Interest on their Investments, while, from the state of the Money Market, they can only re-invest the surplus income at a low rate of Interest, in order to replace the Capital expended.

For this practically useful Table I am indebted to Mr. PETER HARDY.

At the present time I am induced to believe that TABLE **VIII.** will be interesting, as containing a record, from the year 1731 to 1851, of the ANNUAL AVERAGE PRICE of CONSOLS and the AVERAGE RATE of INTEREST, together with many important facts; also, the progress of the NATIONAL DEBT during the whole period.

Among the Miscellaneous Class of Tables, I have introduced the LOGARITHMS of NUMBERS 1 to 1200, and in order to make the Table available in the absence of one extending to 108,000, I have proposed a *New Method* of obtaining the LOGS. of high numbers with little trouble and perfect accuracy, to the 5th place. The same method may be applied with equal success to the NATURAL (or LORD NEPER'S) LOGARITHMS.

In the APPENDIX are various LEGACY DUTY TABLES, together with Examples and Scale of the Duties payable.

By reference to the TABLE of CONTENTS and the INDEX, the information contained in this Volume may be readily found.

CHARLES M. WILLICH.

25, Suffolk Street, Pall Mall,
August, 1852.

TABLE OF CONTENTS.

MISCELLANEOUS TABLES.

ADDITIONAL TABLES.

☞ Vide Preface to Third Edition. Page viii.

NOTES.

LIFEHOLD,

LEASEHOLD,

RENEWAL FINES,

&c. &c. &c.

PRESENT WORTH of a REVERSIONARY FREEHOLD ESTATE, or of an ADVOWSON, after the death of the Party in Possession, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N.B. By this Table is seen, opposite each age, the amount which at the respective rates of interest will, with Compound interest at the same rate, amount to the full value of the property at the death of the party, provided he lives the number of years given by the Carlisle Table of Mortality.

Age of Party in Possession.	3 ⅌ Cent.	4 ⅌ Cent.	5 ⅌ Cent.	6 ⅌ Cent.	7 ⅌ Cent.	8 ⅌ Cent.	9 ⅌ Cent.	10 ⅌ Cent.	Age of Party in Possession.
	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	
0	16·01	10·72	7·92	6·25	5·11	4·32		3·56	0
1	13·25	8·44	6·00	4·59	3·68	3·06	2·61	2·27	1
2	11·82	7·22	5·02	3·74	2·94	2·41	2·05	1·75	2
3	10·65	6·29	4·17	3·01	2·31	1·85	1·53	1·29	3
4	10·05	5·77	3·73	2·62	1·96	1·54	1·25	1·04	4
5	9·64	5·41	3·43	2·34	1·73	1·31	1·03	·86	5
6	9·49	5·35	3·28	2·20	1·59	1·20	·94	·76	6
7	9·48	5·28	3·21	2·15	1·53	1·14	·89	·71	7
8	9·53	5·29	3·21	2·14	1·51	1·13	·87	·69	8
9	9·65	5·33	3·26	2·16	1·53	1·11	·87	·69	9
10	9·82	5·42	3·32	2·22	1·57	1·16	·90	·71	10
11	10·00	5·54	3·42	2·29	1·62	1·20	·92	·74	11
12	10·19	5·66	3·50	2·34	1·66	1·24	·96	·76	12
13	10·37	5·79	3·59	2·41	1·71	1·28	·99	·79	13
14	10·56	5·92	3·68	2·47	1·76	1·32	1·02	·81	14
15	10·75	6·04	3·77	2·54	1·81	1·35	1·05	·84	15
16	10·93	6·16	3·85	2·60	1·86	1·39	1·08	·86	16
17	11·10	6·28	3·93	2·65	1·90	1·42	1·10	·88	17
18	11·27	6·39	4·01	2·71	1·94	1·45	1·13	·90	18
19	11·45	6·44	4·09	2·77	1·99	1·48	1·15	·92	19
20	11·64	6·66	4·18	2·83	2·03	1·51	1·17	·93	20
21	11·83	6·77	4·27	2·90	2·07	1·55	1·20	·96	21
22	12·03	6·90	4·37	2·97	2·13	1·59	1·23	·98	22
23	12·25	7·05	4·47	3·04	2·20	1·64	1·27	1·01	23
24	12·45	7·20	4·58	3·12	2·25	1·69	1·31	1·04	24
25	12·67	7·35	4·70	3·21	2·31	1·74	1·35	1·08	25
26	12·89	7·51	4·81	3·30	2·38	1·79	1·39	1·11	26
27	13·12	7·68	4·95	3·39	2·45	1·85	1·44	1·15	27
28	13·35	7·84	5·06	3·49	2·52	1·90	1·49	1·19	28
29	13·57	8·00	5·17	3·57	2·59	1·96	1·53	1·23	29

E.G. The PRESENT WORTH of a REVERSIONARY FREEHOLD ESTATE, or of an ADVOWSON, subject to the Life of a Party aged 25, at 4 ⅌ cent. is 7·35, or 7¼ years' purchase; and the present worth of each £100 of NET INCOME is £735.

If calculated at 6 ⅌ cent. the present worth is 3·30, or nearly 3¼ years' purchase; and the present worth of each £100 of NET INCOME is £330.

Present Worth of a Reversionary Freehold Estate, or of an Advowson, after the death of the Party in Possession, according to the Carlisle Table of Mortality.

☞ The Answers show the value of each £100 of net income, as well as the number of years' purchase.

N.B. By this Table is seen, opposite each age, the amount which at the respective rates of interest will, with Compound Interest at the same rate, amount to the full value of the perpetuity at the death of the party, provided he lives the number of years given by the Carlisle Table of Mortality.

Age of Party in Possession.	Years' Purchase, or Pounds for each £100 a Year.								Age of Party in Possession.
	3 ₰ Cent.	4 ₰ Cent.	5 ₰ Cent.	6 ₰ Cent.	7 ₰ Cent.	8 ₰ Cent.	9 ₰ Cent.	10 ₰ Cent.	
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	
30	13 78	8 15	5 28	3 64	2 65	2 00	1 56	1 25	**30**
31	13 98	8 29	5 38	3 72	2 71	2 04	1 60	1 28	31
32	14 20	8 45	5 49	3 80	2 77	2 09	1 63	1 31	32
33	14 42	8 61	5 61	3 89	2 84	2 14	1 67	1 34	33
34	14 66	8 78	5 74	3 99	2 91	2 20	1 72	1 38	34
35	14 90	8 96	5 87	4 09	2 99	2 26	1 77	1 42	**35**
36	15 15	9 14	6 01	4 20	3 07	2 33	1 82	1 46	36
37	15 40	9 33	6 16	4 31	3 16	2 40	1 88	1 51	37
38	15 66	9 53	6 30	4 43	3 25	2 47	1 94	1 56	38
39	15 93	9 73	6 46	4 54	3 35	2 55	2 00	1 61	39
40	16 19	9 93	6 61	4 66	3 44	2 62	2 06	1 66	**40**
41	16 44	10 12	6 75	4 77	3 53	2 69	2 12	1 71	41
42	16 69	10 30	6 90	4 89	3 61	2 76	2 17	1 75	42
43	16 94	10 49	7 04	5 00	3 70	2 83	2 23	1 79	43
44	17 20	10 69	7 19	5 11	3 79	2 90	2 28	1 84	44
45	17 47	10 89	7 35	5 24	3 89	2 98	2 35	1 89	**45**
46	17 75	11 11	7 52	5 37	3 99	3 06	2 41	1 94	46
47	18 04	11 34	7 70	5 51	4 11	3 15	2 49	2 00	47
48	18 35	11 58	7 89	5 67	4 23	3 26	2 57	2 07	48
49	18 68	11 85	8 10	5 84	4 38	3 38	2 67	2 16	49
50	19 03	12 13	8 34	6 03	4 54	3 51	2 79	2 25	**50**
51	19 40	12 43	8 59	6 24	4 71	3 66	2 91	2 36	51
52	19 77	12 74	8 84	6 46	4 89	3 81	3 05	2 48	52
53	20 15	13 05	9 11	6 68	5 08	3 98	3 18	2 60	53
54	20 53	13 37	9 37	6 90	5 27	4 14	3 33	2 73	54
55	20 92	13 70	9 65	7 14	5 48	4 32	3 48	2 86	**55**
56	21 32	14 03	9 94	7 38	5 69	4 50	3 64	3 00	56
57	21 72	14 37	10 23	7 64	5 91	4 70	3 82	3 16	57
58	22 11	14 71	10 52	7 89	6 13	4 89	3 99	3 31	58
59	22 49	15 04	10 80	8 14	6 34	5 08	4 16	3 46	59

E.G. The present worth of a Reversionary Freehold Estate, or of an Advowson, subject to the Life of a Party aged 40, at 4 ₰ cent. is 9 93, or rather less than 10 years' purchase; and the present worth of each £100 of net income is £993.

If calculated at 5 ₰ cent., the present worth is 6 61, or nearly 6⅝ years' purchase; and the present worth of each £100 of net income is £661.

PRESENT WORTH of a REVERSIONARY FREEHOLD ESTATE, or of an ADVOWSON, after the death of the Party in Possession, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of any income, as well as the number of years' purchase.

N.B. By this Table is seen, opposite each age, the amount which at the respective rates of interest will, with Compound Interest at the same rate, amount to the full value of the property at the death of the party, provided he lives the number of years given by the Carlisle Table of Mortality.

Age of Party in Possession.	Years' Purchase, or Pounds for each £100 a Year.								Age of Party in Possession.
	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	
	Years Purs.	Years Purs.	Years Purs.	Years Purs.	Years Purs.	Years Purs.	Years Purs.	Years Purs.	
60	22 91	15 34	10 96	8 36	6 54	5 35	4 31	3 60	60
61	23 35	15 68	11 09	8 56	6 71	5 40	4 44	3 71	61
62	23 56	15 88	11 30	8 73	6 88	5 53	4 57	3 83	62
63	23 76	16 13	11 34	8 95	7 06	5 70	4 71	3 94	63
64	24 09	16 41	11 59	9 16	7 24	5 87	4 85	4 08	64
65	24 41	16 69	12 23	9 39	7 44	6 04	5 01	4 20	65
66	24 73	16 99	12 50	9 63	7 64	6 23	5 17	4 36	66
67	25 10	17 30	12 77	9 86	7 88	6 42	5 35	4 52	67
68	25 46	17 62	13 06	10 12	8 10	6 65	5 54	4 70	68
69	25 83	17 95	13 36	10 39	8 34	6 86	5 74	4 88	69
70	26 21	18 29	13 65	10 67	8 59	7 09	5 95	5 08	70
71	26 59	18 64	13 98	10 96	8 85	7 31	6 17	5 29	71
72	26 96	18 97	14 29	11 24	9 12	7 56	6 41	5 49	72
73	27 29	19 21	14 56	11 49	9 36	7 79	6 61	5 69	73
74	27 58	19 54	14 81	11 72	9 57	7 98	6 79	5 86	74
75	27 82	19 76	15 01	11 90	9 74	8 14	6 93	5 99	75
76	28 05	19 98	15 21	12 09	9 90	8 30	7 08	6 12	76
77	28 27	20 17	15 39	12 25	10 06	8 44	7 21	6 25	77
78	28 49	20 39	15 58	12 43	10 22	8 58	7 35	6 38	78
79	28 71	20 61	15 79	12 62	10 40	8 76	7 51	6 53	79
80	28 97	20 87	15 98	12 81	10 57	8 92	7 66	6 67	80
81	29 21	21 06	16 20	13 01	10 76	9 10	7 83	6 83	81
82	29 43	21 25	16 39	13 19	10 93	9 26	7 99	6 97	82
83	29 66	21 46	16 59	13 38	11 11	9 43	8 16	7 12	83
84	29 88	21 67	16 79	13 56	11 29	9 60	8 30	7 27	84
85	30 10	21 88	16 98	13 76	11 47	9 77	8 47	7 43	85
86	30 20	22 07	17 17	13 93	11 63	9 93	8 61	7 56	86
87	30 46	22 23	17 33	14 07	11 77	10 06	8 74	7 68	87
88	30 56	22 32	17 48	14 15	11 85	10 15	8 81	7 76	88
89	30 67	22 47	17 58	14 25	11 96	10 22	8 90	7 83	89
90	30 83	22 55	17 68	14 40	12 09	10 31	8 94	7 88	90

E.G. The PRESENT WORTH of a REVERSIONARY FREEHOLD ESTATE, or of an ADVOWSON, subject to the Life of a Party aged 71, at 5 ℘ cent. is 13.98, or very nearly 14 years' purchase; and the present worth of each £100 of said income is £1398.

If calculated at 6 ℘ cent., the present worth is 10.96, or nearly 11 years' purchase; and the present worth of each £100 of said income is £1096.

TABLE II.

Present Worth of the Fee Simple of a Freehold Estate; or of an Advowson and Next Presentation to a Living, supposing that immediate Possession could be given.

Rate ℔ Cent.	Number of Years' Purchase.	Present Worth of £100 ℔ Annum of Net Income.		
	Years. Parts.			
At 2 ℔ Cent.	50·	or £5,000 for each £100 a year of Net Income.		
" 2¼ "	44·444	" 4,444	"	"
" 2½ "	40·	" 4,000	"	"
" 2¾ "	36·363	" 3,636	"	"
" 3 "	33·333	" 3,333	"	"
" 3⅓ "	30·	" 3,000	"	"
" 3½ "	28·571	" 2,857	"	"
" 3⅔ "	27·272	" 2,727	"	"
" 4 "	25·	" 2,500	"	"
" 5 "	20·	" 2,000	"	"
" 6 "	16·666	" 1,666	"	"
" 7 "	14·285	" 1,428	"	"
" 8 "	12·500	" 1,250	"	"

TABLE III.

Table showing the several times at which any Principal doubles itself at the several rates of Interest stated.

Rate of Interest.	Years at	
	Simple Interest.	Compound Interest.
2	50·	35·0027 8878
2½	40·	28·0710 3453
3	33·3333 3333	23·4497 7225
3½	28·5714 2857	20·1487 9168
4	25·	17·6729 8769
4½	22·2222 2222	15·7473 0184
5	20·	14·2066 9908
6	16·6666 6667	11·8956 6105
7	14·2857 1429	10·2447 6835
8	12·5	9·0064 6834
9	11·1111 1111	8·0432 3173
10	10·	7·2725 4090

N. B. In order to demonstrate the great difference between Simple and Compound Interest, Mr. Francis Baily has calculated up to the year 1810, that if One Penny had been put out at 5 ℔ Cent. Compound Interest, at the Birth of Christ, it would have amounted to more money than could be expressed by 357 millions of globes, each equal to the Earth in magnitude, all of solid gold of standard quality, worth at the Mint price £3. 17*s*. 10½*d*. ℔ ounce. Whereas, if the Penny had been put out at the same rate of Simple Interest, the amount in the same time would have been only *seven shillings and sevenpence halfpenny*.

TABLE IV.

PRESENT WORTH of PROPERTY held on a SINGLE LIFE, as of a Party in Possession of a Living or Benefice, or the holder of a LEASE, ESTATE, or ANNUITY, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest the surplus income, beyond the interest on the purchase-money, at the same rate of interest.

Age of Party in Possession.	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	Age of Party in Possession.
	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.								
	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	
0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		6 71	0
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 14	5
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 24	6
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 29	7
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 30	8
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 30	9
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10 21	[illegible]	10
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14
15	[illegible]	[illegible]	[illegible]	[illegible]	12 47	[illegible]	[illegible]	9 16	15
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 14	16
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 12	17
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10 98	9 94	[illegible]	20
21	[illegible]	[illegible]	[illegible]	[illegible]	12 21	10 95	9 91	[illegible]	21
22	[illegible]	[illegible]	[illegible]	[illegible]	12 15	10 90	9 87	[illegible]	22
23	[illegible]	[illegible]	[illegible]	[illegible]	12 10	10 86	9 84	[illegible]	23
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10 81	9 80	[illegible]	24
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 72	[illegible]	26
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 67	[illegible]	27
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 62	[illegible]	28
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 58	[illegible]	29

E. G. An ESTATE or ANNUITY held on a Life—aged 23: The PRESENT WORTH at 4 ℘ cent. is 17 95, or nearly 18 years' purchase; and the present worth of each £100 of NET INCOME is £1795.

If calculated at 7 ℘ cent., the present worth is 12 10, or rather more than 12 years' purchase, and the present worth of each £100 of NET INCOME is £1210.

Present Worth of Property held on a Single Life, as of a Party in Possession of a Living or Benefice, or the holder of a Lease, Estate, or Annuity, according to the Carlisle Table of Mortality.

☞ The Answers show the value of each £100 of net income, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his capital, provided he can re-invest the surplus income, beyond the interest on the purchase-money, at the same rate of interest.

Age of Party in Possession.	Years' Purchase, or Pounds for each £100 a Year.								Age of Party in Possession.
	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	
	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
30	19 55	16 85	14 72	13 02	11 63	10 50	9 55	8 75	**30**
31	19 35	16 70	14 62	12 94	11 58	10 45	9 51	8 72	31
32	19 13	16 55	14 50	12 86	11 51	10 41	9 47	8 69	32
33	18 91	16 39	14 39	12 77	11 45	10 35	9 43	8 66	33
34	18 67	16 22	14 26	12 67	11 37	10 30	9 39	8 62	34
35	18 43	16 04	14 13	12 57	11 29	10 23	9 34	8 58	**35**
36	18 18	15 85	13 99	12 46	11 21	10 17	9 28	8 53	36
37	17 93	15 66	13 84	12 35	11 12	10 10	9 23	8 49	37
38	17 67	15 47	13 69	12 24	11 03	10 02	9 17	8 44	38
39	17 40	15 27	13 54	12 12	10 94	9 95	9 11	8 39	39
40	17 14	15 07	13 39	12 00	10 84	9 87	9 04	8 34	**40**
41	16 89	14 88	13 24	11 89	10 76	9 80	8 99	8 29	41
42	16 64	14 69	13 10	11 78	10 67	9 74	8 94	8 25	42
43	16 39	14 50	12 96	11 67	10 58	9 67	8 88	8 20	43
44	16 13	14 31	12 80	11 55	10 49	9 60	8 82	8 16	44
45	15 86	14 10	12 65	11 43	10 40	9 52	8 76	8 11	**45**
46	15 58	13 89	12 48	11 29	10 29	9 43	8 70	8 05	46
47	15 29	13 66	12 30	11 15	10 18	9 34	8 62	7 99	47
48	14 98	13 42	12 11	11 00	10 05	9 24	8 54	7 92	48
49	14 65	13 15	11 89	10 82	9 91	9 12	8 44	7 84	49
50	14 30	12 87	11 66	10 63	9 75	8 99	8 32	7 74	**50**
51	13 93	12 56	11 41	10 42	9 57	8 84	8 20	7 63	51
52	13 56	12 26	11 15	10 21	9 39	8 68	8 05	7 52	52
53	13 18	11 94	10 89	9 99	9 20	8 52	7 92	7 40	53
54	12 80	11 62	10 62	9 76	9 01	8 35	7 78	7 27	54
55	12 41	11 30	10 35	9 52	8 81	8 18	7 63	7 14	**55**
56	12 01	10 96	10 06	9 28	8 59	7 99	7 46	6 99	56
57	11 61	10 62	9 77	9 03	8 37	7 80	7 29	6 84	57
58	11 22	10 28	9 48	8 77	8 15	7 60	7 12	6 69	58
59	10 84	9 96	9 20	8 53	7 94	7 42	6 95	6 54	59

E.G. A Living, Estate, or Annuity held on a Life—aged 30: The present worth at **5** ℘ cent. is 14 72, or nearly 14¾ years' purchase; and the present worth of each £100 of net income is £1472.

If calculated at **6** ℘ cent., the present worth is 13 02, or 13 years' purchase; and the present worth of each £100 of net income is £1302.

PRESENT WORTH OF PROPERTY held on a SINGLE LIFE, as of a Party in Possession of a Living or Benefice, or the holder of a LEASE, ESTATE, or ANNUITY, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his capital, provided he can re-invest the surplus income, beyond the interest on the purchase-money, at the same rate of interest.

Age of Party in Possession	Years' Purchase, or Pounds for each £100 a Year.								Age of Party in Possession
	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	
60	10.15	9.65	8.54	8.20	7.74	7.33	6.98	6.66	60
61	10.16	9.40	8.71	8.12	7.53	7.09	6.67	6.29	61
62	9.87	9.22	8.49	7.91	7.48	6.95	6.44	6.17	62
63	9.52	8.81	8.25	7.71	7.23	6.79	6.40	6.00	63
64	9.24	8.50	8.81	7.50	7.03	6.63	6.20	5.92	64
65	8.92	8.51	7.76	7.28	6.85	6.46	6.10	5.78	65
66	8.58	8.01	7.50	7.05	6.64	6.27	5.94	5.65	66
67	8.23	7.70	7.23	6.80	6.42	6.07	5.76	5.47	67
68	7.92	7.38	6.94	6.54	6.19	5.98	5.57	5.30	68
69	7.58	7.03	6.64	6.28	5.94	5.64	5.37	5.13	69
70	7.15	6.71	6.35	6.00	5.69	5.41	5.15	4.92	70
71	6.74	6.30	6.01	5.70	5.42	5.16	4.99	4.78	71
72	6.37	6.02	5.71	5.43	5.16	4.92	4.78	4.58	72
73	6.01	5.72	5.45	5.17	4.92	4.19	4.58	4.34	73
74	5.73	5.46	5.19	4.95	4.12	4.64	4.35	4.14	74
75	5.51	5.21	4.99	4.76	4.55	4.35	4.17	4.01	75
76	5.28	5.02	4.79	4.59	4.38	4.19	4.03	3.87	76
77	5.06	4.82	4.61	4.41	4.23	4.05	3.90	3.75	77
78	4.81	4.62	4.42	4.24	4.07	3.91	3.76	3.63	78
79	4.59	4.39	4.21	4.04	3.88	3.73	3.60	3.47	79
80	4.36	4.18	4.01	3.86	3.71	3.58	3.45	3.33	80
81	4.12	3.95	3.80	3.65	3.52	3.40	3.28	3.17	81
82	3.90	3.74	3.60	3.47	3.35	3.23	3.13	3.03	82
83	3.67	3.53	3.40	3.28	3.17	3.07	2.97	2.88	83
84	3.45	3.33	3.21	3.10	3.00	2.91	2.82	2.73	84
85	3.25	3.11	3.01	2.91	2.82	2.73	2.64	2.57	85
86	3.03	2.93	2.83	2.74	2.65	2.57	2.49	2.42	86
87	2.87	2.77	2.68	2.60	2.52	2.44	2.37	2.30	87
88	2.77	2.66	2.58	2.51	2.44	2.36	2.30	2.23	88
89	2.66	2.58	2.49	2.42	2.34	2.27	2.21	2.15	89
90	2.50	2.47	2.34	2.26	2.20	2.12	2.07	2.01	90

E.G. A LIVING, LEASE, ESTATE, or ANNUITY held on a Life—aged 66: The measure of value at 4 ℘ cent. is 8.01, or 8 years' purchase; and the present worth of each £100 of NET INCOME is £801.

If calculated at 5 ℘ cent., the present worth is 7.50, or 7½ years' purchase; and the present worth of each £100 of NET INCOME is £750.

PRESENT WORTH OF PROPERTY held on a SINGLE LIFE, as of a Party in possession of a Living or Benefice, or the holder of a LEASE, ESTATE, or ANNUITY, according to the **CARLISLE** Table of Mortality;

Supposing the Purchaser thereof to take out of the Annuity £4 ℔ cent., £5 ℔ cent., £6 ℔ cent., or £7 ℔ cent. per Annum, as available Interest on his PURCHASE MONEY, or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such Interest, so as to make 3 ℔ cent. thereof, in order to replace the Purchase Money or Capital.*

☞ The Answers show the value in Pounds of each £100 of NET INCOME, as well as the number of years' purchase.

Age of Party in Possession.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.				Age of Party in Possession.
	The available Interest on Capital, if the re-investments be made at **3** per Cent.				
	4 ℔ Cent.	**5** ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.	
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	
0	14 77	12 87	11 40	10 23	**0**
1	16 72	14 33	12 53	11 13	1
2	17 70	15 04	13 07	11 56	2
3	18 48	15 60	13 49	11 89	3
4	18 90	15 90	13 72	12 06	4
5	19 16	16 08	13 85	12 16	**5**
6	19 27	16 15	13 91	12 21	6
7	19 27	16 15	13 91	12 21	7
8	19 23	16 13	13 89	12 19	8
9	19 16	16 08	13 85	12 16	9
10	19 05	16 00	13 79	12 12	**10**
11	18 90	15 90	13 72	12 06	11
12	18 80	15 82	13 66	12 02	12
13	18 69	15 75	13 60	11 98	13
14	18 55	15 65	13 53	11 92	14
15	18 42	15 55	13 46	11 86	**15**
16	18 31	15 48	13 40	11 82	16
17	18 18	15 38	13 33	11 76	17
18	18 08	15 31	13 28	11 72	18
19	17 95	15 22	13 21	11 67	19

E.G. The PRESENT WORTH of an ANNUITY on a Life aged 17, if the Purchaser is to make **6** ℔ cent. on the purchase-money, and to re-invest the surplus at **3** ℔ cent. to replace capital, is 13 33 or 13⅓ years' purchase of the NET INCOME, and the present worth of each £100 of NET INCOME is £1333.

If it be required to make **7** ℔ cent. on the purchase-money, and re-invest the surplus at **3** ℔ cent., the present worth is 11 76 or 11¾ years' purchase of the NET INCOME; and the present worth of each £100 of NET INCOME is £1176.

* See Table [No. I] Annuities on Lives.

PRESENT WORTH of PROPERTY held on a SINGLE LIFE, as of a Party in possession of a Living or Benefice, or the holder of a LEASE, ESTATE, or ANNUITY, according to the **CARLISLE** Table of Mortality;

Supposing the Purchaser thereof to take out of the Annuity £4 ℔ cent., £5 ℔ cent., £6 ℔ cent., or £7 ℔ cent. per Annum, as available Interest on his PURCHASE MONEY, or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such interest, so as to make 3 ℔ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The Answers show the value in Pounds of each £100 NET INCOME, as well as the number of years' purchase.

Age of Party in Possession.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR. The available Interest on Capital, if the re-investments be made at **3** per Cent.				Age of Party in possession.
	4 ℔ Cent.	**5** ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.	
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	
20	17 82	15 13	13 14	11 61	**20**
21	17 70	15 04	13 07	11 56	21
22	17 57	14 95	13 00	11 51	22
23	17 42	14 84	12 92	11 44	23
24	17 27	14 73	12 84	11 38	24
25	17 12	14 62	12 75	11 31	**25**
26	16 98	14 51	12 67	11 25	26
27	16 81	14 39	12 58	11 17	27
28	16 67	14 28	12 50	11 11	28
29	16 50	14 16	12 41	11 04	29
30	16 37	14 06	12 33	10 98	**30**
31	16 21	13 95	12 24	10 90	31
32	16 05	13 83	12 15	10 83	32
33	15 90	13 72	12 06	10 76	33
34	15 72	13 59	11 96	10 68	34
35	15 58	13 48	11 88	10 61	**35**
36	15 38	13 33	11 76	10 53	36
37	15 20	13 19	11 65	10 44	37
38	15 01	13 05	11 55	10 35	38
39	14 81	12 90	11 43	10 26	39
40	14 64	12 77	11 32	10 17	**40**
41	14 45	12 63	11 21	10 08	41
42	14 26	12 48	11 10	9 99	42
43	14 08	12 34	10 99	9 90	43
44	13 89	12 19	10 87	9 80	44
45	13 70	12 05	10 75	9 71	**45**
46	13 48	11 88	10 61	9 60	46
47	13 26	11 71	10 48	9 49	47
48	13 04	11 53	10 34	9 37	48
49	12 79	11 34	10 18	9 24	49

PRESENT WORTH OF PROPERTY held on a SINGLE LIFE, as of a Party in possession of a Living or Benefice, or the holder of a LEASE, ESTATE, or ANNUITY, according to the CARLISLE Table of Mortality;

Supposing the purchaser thereof to take out of the Annuity £4 ℔ cent., £5 ℔ cent., or £6 ℔ cent., or £7 ℔ cent. per Annum, as available Interest on his PURCHASE MONEY, or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such Interest, so as to make 3 ℔ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The Answers show the value in Pounds of each £100 of NET INCOME, as well as the number of years' purchase.

Age of Party in Possession.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR. The available Interest on Capital, if the re-investments be made at 3 per Cent. 4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	Age of Party in Possession.
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	
50	12 51	11 12	10 01	9 10	**50**
51	12 22	10 89	9 82	8 94	51
52	11 95	10 67	9 64	8 79	52
53	11 64	10 43	9 44	8 63	53
54	11 35	10 19	9 25	8 47	54
55	11 04	9 94	9 04	8 29	**55**
56	10 72	9 68	8 83	8 11	56
57	10 40	9 42	8 61	7 93	57
58	10 09	9 16	8 40	7 74	58
59	9 78	8 91	8 18	7 56	59
60	9 50	8 67	7 98	7 39	**60**
61	9 24	8 46	7 80	7 23	61
62	8 98	8 24	7 62	7 08	62
63	8 73	8 03	7 43	6 92	63
64	8 47	7 81	7 24	6 75	64
65	8 19	7 57	7 04	6 57	**65**
66	7 90	7 33	6 82	6 39	66
67	7 60	7 07	6 60	6 19	67
68	7 29	6 80	6 36	5 98	68
69	6 98	6 52	6 12	5 77	69
70	6 65	6 23	5 87	5 54	**70**

E.G. The PRESENT WORTH OF AN ANNUITY on a Life aged 64, if the Purchaser is to make 6 ℔ cent. on the purchase-money, and to re-invest the surplus at 3 ℔ cent. to replace capital, is 7 24 or 7¼ years' purchase of the NET INCOME, and the present worth of each £100 of NET INCOME is £724.

If it be required to make 7 ℔ cent. on the purchase-money, and re-invest the surplus at 3 ℔ cent., the present worth is 6 75 or 6¾ years' purchase of the NET INCOME, and the present worth of each £100 of NET INCOME is £675.

PRESENT WORTH OF PROPERTY held on Two JOINT LIVES, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY, at the same rate of interest.

Ages of the Lives.	3 ℔ Cent. Years. Parts	4 ℔ Cent. Years. Parts	5 ℔ Cent. Years. Parts	6 ℔ Cent. Years. Parts
	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.			
5 5	19 81	16 80	14 51	12 72
10	19 87	16 91	14 65	12 87
15	19 29	16 49	14 33	12 63
20	18 72	16 10	14 05	12 42
25	18 01	15 58	13 67	12 13
30	17 22	15 00	13 23	11 80
35	16 39	14 39	12 77	11 45
40	15 39	13 63	12 19	10 98
45	14 38	12 86	11 59	10 52
50	13 09	11 83	10 76	9 85
55	11 46	10 47	9 62	8 88
60	9 77	9 02	8 37	7 89
65	8 37	7 81	7 31	6 87
70	6 74	6 35	6 01	5 69
75	5 24	4 99	4 75	4 54
80	4 17	4 00	3 84	3 70
85	3 10	2 99	2 89	2 80
90	2 40	2 33		
10 10	19 96	17 05	14 80	13 03
15	19 41	16 64	14 50	12 80
20	18 87	16 26	14 22	12 59
25	18 19	15 77	13 85	12 31
30	17 41	15 19	13 41	11 97
35	16 59	14 59	12 96	11 63
40	15 60	13 83	12 38	11 17
45	14 60	13 06	11 78	10 70
50	13 31	12 03	10 95	10 03
55	11 67	10 66	9 80	9 05
60	9 96	9 19	8 53	7 94
65	8 54	7 97	7 46	7 01
70	6 87	6 48	6 13	5 81
75	5 35	5 09	4 85	4 63
80	4 26	4 09	3 92	3 77
85	3 17	3 05	2 95	2 86
90	2 45	2 37	2 30	2 23
15 15	18 91	16 27	14 21	12 58
20	18 42	15 92	13 96	12 38
25	17 79	15 46	13 61	12 11
30	17 06	14 92	13 19	11 79
35	16 29	14 35	12 76	11 46
40	15 35	13 62	12 20	11 02
45	14 38	12 88	11 63	10 57
50	13 13	11 88	10 82	9 91
15 55	11 53	10 54	9 69	8 95
60	9 85	9 10	8 44	7 87
65	8 46	7 90	7 40	6 95
70	6 82	6 43	6 08	5 77
75	5 31	5 06	4 82	4 60
80	4 23	4 06	3 90	3 75
85	3 15	3 04	2 94	2 84
90	2 44	2 36	2 29	2 22
20 20	17 99	15 61	13 72	12 20
25	17 42	15 18	13 40	11 95
30	16 75	14 68	13 01	11 64
35	16 03	14 14	12 60	11 33
40	15 13	13 45	12 06	10 90
45	14 21	12 74	11 51	10 47
50	12 99	11 77	10 73	9 83
55	11 43	10 46	9 62	8 89
60	9 78	9 04	8 39	7 82
65	8 41	7 85	7 36	6 92
70	6 79	6 41	6 06	5 74
75	5 30	5 04	4 81	4 59
80	4 22	4 05	3 89	3 74
85	3 14	3 03	2 93	2 83
90	2 44	2 36	2 28	2 21
25 25	16 91	14 80	13 10	11 72
30	16 31	14 34	12 74	11 43
35	15 66	13 85	12 36	11 14
40	14 82	13 20	11 85	10 73
45	13 95	12 53	11 33	10 32
50	12 79	11 60	10 58	9 71
55	11 27	10 32	9 50	8 79
60	9 67	8 94	8 30	7 74
65	8 33	7 78	7 29	6 86
70	6 73	6 36	6 02	5 70
75	5 26	5 01	4 78	4 56
80	4 20	4 03	3 87	3 73
85	3 13	3 02	2 92	2 82
90	2 43	2 35	2 27	2 20
30 30	15 78	13 93	12 42	11 17
35	15 21	13 49	12 08	10 90
40	14 45	12 90	11 61	10 52
45	13 65	12 28	11 12	10 14
50	12 55	11 39	10 40	9 55

Years' Purchase, or Pounds for each £100 a Year.

Ages of the Lives.	3 ℔ Cent. Years. Parts.	4 ℔ Cent. Years. Parts.	5 ℔ Cent. Years. Parts.	6 ℔ Cent. Years. Parts.
30 55	11 09	10 16	9 36	8 66
60	9 53	8 82	8 19	7 64
65	8 22	7 69	7 21	6 78
70	6 66	6 29	5 95	5 65
75	5 21	4 96	4 73	4 52
80	4 17	4 00	3 84	3 70
85	3 11	3 00	2 90	2 80
90	2 41	2 33	2 26	2 19
35 35	14 72	13 11	11 78	10 66
40	14 05	12 58	11 35	10 32
45	13 33	12 02	10 91	9 97
50	12 31	11 19	10 24	9 41
55	10 92	10 02	9 24	8 56
60	9 41	8 71	8 10	7 56
65	8 14	7 61	7 14	6 72
70	6 61	6 24	5 91	5 61
75	5 18	4 93	4 70	4 50
80	4 15	3 98	3 82	3 68
85	3 09	2 99	2 89	2 80
90	2 40	2 32	2 25	2 18
40 40	13 48	12 12	10 98	10 01
45	12 87	11 64	10 60	9 70
50	11 95	10 89	9 98	9 20
55	10 66	9 79	9 04	8 39
60	9 22	8 55	7 96	7 43
65	8 00	7 49	7 03	6 62
70	6 51	6 16	5 83	5 53
75	5 11	4 87	4 65	4 44
80	4 10	3 94	3 78	3 64
85	3 06	2 96	2 86	2 77
90	2 38	2 30	2 23	2 16
45 45	12 37	11 24	10 28	9 44
50	11 58	10 59	9 74	8 99
55	10 40	9 58	8 87	8 24
60	9 06	8 42	7 84	7 34
65	7 91	7 41	6 96	6 56
70	6 46	6 11	5 79	5 50
75	5 09	4 85	4 63	4 43
80	4 09	3 92	3 77	3 63
85	3 05	2 95	2 85	2 76
90	2 37	2 30	2 23	2 16
50 50	10 94	10 06	9 29	8 62
55	9 92	9 18	8 53	7 95
60	8 73	8 13	7 60	7 13
50 65	7 69	7 22	6 80	6 42
70	6 34	6 00	5 69	5 41
75	5 02	4 79	4 58	4 38
80	4 05	3 89	3 74	3 61
85	3 04	2 94	2 84	2 75
90	2 36	2 29	2 22	2 15
55 55	9 10	8 46	7 90	7 40
60	8 10	7 57	7 10	6 68
65	7 22	6 80	6 42	6 07
70	6 02	5 71	5 43	5 17
75	4 81	4 60	4 40	4 22
80	3 92	3 77	3 63	3 50
85	2 96	2 86	2 77	2 68
90	2 31	2 23	2 17	2 10
60 60	7 29	6 85	6 45	6 10
65	6 59	6 22	5 89	5 59
70	5 56	5 29	5 04	4 81
75	4 50	4 30	4 12	3 96
80	3 69	3 56	3 43	3 31
85	2 81	2 72	2 64	2 56
90	2 20	2 13	2 07	2 01
65 65	6 05	5 74	5 45	5 20
70	5 19	4 95	4 74	4 53
75	4 26	4 08	3 92	3 77
80	3 54	3 41	3 30	3 18
85	2 72	2 63	2 55	2 48
90	2 13	2 07	2 01	1 95
70 70	4 55	4 37	4 19	4 03
75	3 80	3 66	3 53	3 40
80	3 23	3 12	3 02	2 92
85	2 52	2 45	2 38	2 31
90	1 99	1 93	1 88	1 83
75 75	3 23	3 12	3 01	2 91
80	2 79	2 70	2 62	2 54
85	2 22	2 16	2 10	2 04
90	1 76	1 71	1 67	1 63
80 80	2 46	2 39	2 32	2 26
85	1 99	1 94	1 89	1 85
90	1 59	1 55	1 51	1 48
85 85	1 66	1 62	1 58	1 55
90	1 33	1 31	1 28	1 25
90 90	1 09	1 06	1 04	1 02

E.G. A Lease or Annuity held on Two Joint Lives of 30 and 40, determinable on the death of either: the present worth at **4** ℔ cent. is 12 90, or very nearly 13 years' purchase of the net income; and the present worth of each £100 of net income is £1290.

If calculated at **6** ℔ cent., the present worth is 10 52, or 10½ years' purchase; and the present worth of each £100 of net income is £1052.

Present Worth of Property, either Lease, Estate, or Annuity, held on the longest of Two Lives, according to the Carlisle Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N. B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY, at the same rate of interest.

Years' Purchase, or Pounds for each £100 a Year.

Ages of the Lives.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.
	Years. Parts	Years. Parts	Years. Parts	Years. Parts
5 5	27 57	22 38	18 67	15 93
10	27 33	22 26	18 61	15 90
15	26 98	22 05	18 48	15 82
20	26 66	21 86	18 36	15 73
25	26 34	21 65	18 22	15 61
30	26 03	21 44	18 08	15 55
35	25 74	21 24	17 94	15 45
40	25 44	21 03	17 79	15 34
45	25 17	20 84	17 64	15 23
50	24 90	20 63	17 49	15 10
55	24 63	20 42	17 31	14 97
60	24 41	20 23	17 16	14 74
65	24 24	20 08	17 04	14 73
70	24 08	19 95	16 92	14 63
75	23 96	19 84	16 82	14 54
80	23 88	19 77	16 76	14 48
85	23 82	19 71	16 70	14 43
90	23 79	19 68		
10 10	27 06	22 12	18 53	15 86
15	26 68	21 89	18 39	15 77
20	26 33	21 68	18 26	15 69
25	25 99	21 46	18 12	15 59
30	25 66	21 24	17 97	15 49
35	25 35	21 03	17 83	15 39
40	25 05	20 82	17 68	15 28
45	24 77	20 62	17 53	15 17
50	24 50	20 42	17 37	15 05
55	24 25	20 22	17 22	14 92
60	24 04	20 05	17 08	14 81
65	23 89	19 92	16 97	14 72
70	23 76	19 81	16 87	14 63
75	23 67	19 73	16 80	14 57
80	23 61	19 68	16 76	14 53
85	23 57	19 64	16 72	14 50
90	23 56	19 62	16 71	14 48
15 15	26 25	21 64	18 24	15 67
20	25 85	21 39	18 08	15 57
25	25 45	21 14	17 92	15 47
30	25 07	20 89	17 75	15 35
35	24 72	20 65	17 59	15 24
40	24 38	20 40	17 41	15 11
45	24 06	20 17	17 24	14 98

Ages of the Lives.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.
	Years. Parts	Years. Parts	Years. Parts	Years. Parts
15 50	23 75	19 94	17 06	14 84
55	23 46	19 71	16 88	14 70
60	23 22	19 51	16 72	14 56
65	23 04	19 36	16 59	14 46
70	22 89	19 23	16 48	14 36
75	22 78	19 14	16 39	14 28
80	22 71	19 07	16 34	14 23
85	22 66	19 03	16 30	14 19
90	22 64	19 01	16 28	14 17
20 20	25 39	21 11	17 91	15 46
25	24 94	20 82	17 72	15 34
30	24 50	20 54	17 53	15 21
35	24 09	20 26	17 34	15 07
40	23 70	19 98	17 14	14 93
45	23 35	19 72	16 95	14 79
50	23 00	19 46	16 75	14 63
55	22 67	19 20	16 54	14 47
60	22 40	18 98	16 36	14 32
65	22 20	18 81	16 22	14 20
70	22 03	18 66	16 09	14 09
75	21 91	18 56	16 00	14 00
80	21 83	18 49	15 94	13 95
85	21 78	18 44	15 89	13 91
90	21 75	18 42	15 87	13 89
25 25	24 41	20 49	17 50	15 19
30	23 91	20 16	17 28	15 04
35	23 44	19 84	17 06	14 89
40	22 98	19 51	16 84	14 72
45	22 57	19 22	16 61	14 56
50	22 17	18 91	16 38	14 38
55	21 80	18 62	16 14	14 19
60	21 49	18 36	15 94	14 01
65	21 25	18 17	15 77	13 88
70	21 05	17 99	15 62	13 75
75	20 91	17 87	15 51	13 65
80	20 83	17 79	15 44	13 59
85	20 76	17 74	15 39	13 54
90	20 73	17 71	15 36	13 51
30 30	23 33	19 77	17 03	14 87
35	22 78	19 40	16 77	14 69
40	22 25	19 03	16 50	14 49

Years' Purchase, or Pounds for each £100 a Year.

Ages of the Lives.	3 ₽ Cent. Years. Parts.	4 ₽ Cent. Years. Parts.	5 ₽ Cent. Years. Parts.	6 ₽ Cent. Years. Parts.
30 45	21 77	18 68	16 25	14 30
50	21 31	18 33	15 98	14 10
55	20 87	17 99	15 70	13 88
60	20 52	17 69	15 47	13 68
65	20 25	17 47	15 28	13 52
70	20 02	17 27	15 10	13 37
75	19 85	17 13	14 98	13 25
80	19 75	17 03	14 89	13 18
85	19 68	16 97	14 83	13 12
90	19 64	16 93	14 80	13 09
35 35	22 14	18 97	16 47	14 48
40	21 53	18 53	16 16	14 25
45	20 96	18 12	15 86	14 03
50	20 42	17 71	15 55	13 79
55	19 92	17 32	15 23	13 54
60	19 51	16 99	14 96	13 31
65	19 21	16 73	14 75	13 13
70	18 95	16 51	14 55	12 96
75	18 76	16 35	14 41	12 83
80	18 65	16 24	14 31	12 75
85	18 57	16 17	14 24	12 68
90	18 53	16 13	14 21	12 65
40 40	20 80	18 02	15 79	13 99
45	20 14	17 53	15 44	13 72
50	19 49	17 05	15 06	13 43
55	18 89	16 57	14 69	13 14
60	18 41	16 18	14 37	12 87
65	18 05	15 89	14 12	12 66
70	17 75	15 62	13 89	12 46
75	17 54	15 44	13 73	12 31
80	17 40	15 32	13 62	12 22
85	17 31	15 23	13 53	12 14
90	17 26	15 18	13 49	12 10
45 45	19 35	16 96	15 02	13 41
50	18 58	16 38	14 57	13 06
55	17 87	15 82	14 12	12 71
60	17 29	15 35	13 74	12 39
65	16 87	15 00	13 45	12 15
70	16 52	14 70	13 19	11 92
75	16 28	14 49	13 01	11 76
80	16 14	14 36	12 89	11 65
85	16 03	14 27	12 80	11 57
90	15 99	14 22	12 76	11 53
50 50	17 66	15 68	14 03	12 64
55	16 79	14 99	13 48	12 20

Ages of the Lives.	3 ₽ Cent. Years. Parts.	4 ₽ Cent. Years. Parts.	5 ₽ Cent. Years. Parts.	6 ₽ Cent. Years. Parts.
50 60	16 06	14 40	13 00	11 81
65	15 53	13 95	12 62	11 49
70	15 09	13 58	12 30	11 21
75	14 79	13 32	12 07	11 01
80	14 61	13 16	11 93	10 88
85	14 49	13 04	11 83	10 79
90	14 44	12 99	11 78	10 74
55 55	15 71	14 13	12 79	11 65
60	14 80	13 39	12 18	11 14
65	14 10	12 81	11 69	10 73
70	13 51	12 29	11 45	10 35
75	13 11	11 94	10 93	10 07
80	12 85	11 71	10 73	9 88
85	12 67	11 55	10 58	9 75
90	12 60	11 48	10 52	9 68
60 60	13 69	12 47	11 42	10 51
65	12 82	11 74	10 81	9 99
70	12 05	11 08	10 23	9 48
75	11 50	10 60	9 80	9 10
80	11 16	10 29	9 52	8 85
85	10 91	10 05	9 31	8 65
90	10 79	9 95	9 21	8 56
65 65	11 79	10 87	10 07	9 36
70	10 85	10 06	9 36	8 74
75	10 17	9 46	8 83	8 27
80	9 74	9 07	8 48	7 95
85	9 43	8 79	8 22	7 71
90	9 28	8 65	8 09	7 59
70 70	9 69	9 05	8 48	7 97
75	8 83	8 29	7 80	7 35
80	8 26	7 77	7 33	6 93
85	7 83	7 37	6 96	6 59
90	7 63	7 19	6 79	6 43
75 75	7 79	7 36	6 96	6 60
80	7 09	6 72	6 38	6 07
85	6 52	6 20	5 90	5 62
90	6 25	5 94	5 66	5 39
80 80	6 27	5 97	5 70	5 45
85	5 60	5 35	5 13	4 92
90	5 27	5 05	4 84	4 64
85 85	4 80	4 61	4 43	4 27
90	4 39	4 22	4 07	3 92
90 90	3 91	3 76	3 63	3 51

E.G. A Lease, Estate, or Annuity, held on the longest of Two Lives 65 and 70, that is, so long as either shall exist: the present worth at **4** ₽ cent. is 10 06, or 10 years' purchase of the net income; and the present worth of each £100 of net income is £1006.

If calculated at **6** ₽ cent., the present worth is 8 74, or 8¾ years' purchase; and the present worth of each £100 of net income is £874.

Present Worth of Property, either Lease, Estate, or Annuity, held on the Longest of Two Lives, according to the **CARLISLE** Table of Mortality.

Supposing the Purchaser thereof to take out of the Annuity £5 ⅌ cent., £6 ⅌ cent., or £7 ⅌ cent. per Annum, as available Interest on his Purchase Money, or Capital advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such Interest, so as to make 3 ⅌ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The answers show the value in Pounds of each £100 of net income, as well as the number of years' purchase.

Years' Purchase, or Pounds for each £100 a Year.

Ages of the Lives.	The available Interest on Capital, if the re-investments be made at 3 ⅌ Cent.			Ages of the Lives.	The available Interest on Capital, if the re-investment be made at 3 ⅌ Cent.		
	5 ⅌ Cent.	6 ⅌ Cent.	7 ⅌ Cent.		5 ⅌ Cent.	6 ⅌ Cent.	7 ⅌ Cent.
	Years. Parts	Years. Parts	Years. Parts		Years. Parts	Years. Parts	Years. Parts
5 5	17 76	15 03	13 11	**10 10**	17 57	14 95	13 00
10	17 67	15 01	13 05	15	17 39	14 81	12 90
15	17 51	14 90	12 97	20	17 24	14 70	12 82
20	17 39	14 81	12 90	25	17 09	14 60	12 74
25	17 24	14 70	12 82	30	16 95	14 49	12 66
30	17 12	14 62	12 75	35	16 83	14 41	12 59
35	17 01	14 53	12 69	40	16 69	14 31	12 51
40	16 86	14 43	12 61	45	16 56	14 20	12 44
45	16 75	14 35	12 55	50	16 45	14 12	12 38
50	16 61	14 24	12 47	55	16 34	14 04	12 31
55	16 50	14 16	12 41	60	16 23	13 97	12 25
60	16 39	14 08	12 34	65	16 18	13 93	12 22
65	16 34	14 04	12 31	70	16 10	13 87	12 18
70	16 26	13 99	12 27	75	16 08	13 85	12 16
75	16 21	13 95	12 24	80	16 05	13 83	12 15
80	16 15	13 91	12 21	85	16 02	13 81	12 13
85	16 13	13 89	12 19	90	16 02	13 81	12 13
90	16 13	13 89	12 19				

E.G. The Present Worth of an Annuity, held on the Longest of Two Lives 10 and 30—that is, so long as either shall exist—if the Purchaser is to make **6** ⅌ cent. on the purchase-money, and re-invest the surplus at **3** ⅌ cent. to replace capital, is 14 49 or $14\frac{1}{2}$ years' purchase of the net income, and the present worth of each £100 of net income is £1449.

If it be required to make **7** ⅌ cent. on the purchase-money, and re-invest the surplus at **3** per cent., the present worth is 12 66 or $12\frac{2}{3}$ years' purchase of the net income, and the present worth of each £100 of net income is £1266.

PRESENT WORTH OF PROPERTY, either LEASE, ESTATE, or ANNUITY, held on the LONGEST of TWO LIVES, according to the **CARLISLE** Table of Mortality.

Supposing the Purchaser thereof to take out of the Annuity £5 ℔ cent., £6 ℔ cent., or £7 ℔ cent. per Annum, as available Interest on his PURCHASE MONEY, or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such interest, so as to make 3 ℔ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The Answers show the value in Pounds of each £100 of NET INCOME, as well as the number of years' purchase.

YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.

Ages of the Lives.	The available interest on Capital, if the re-investments be made at **3** ℔ Cent.			Ages of the Lives.	The available interest on Capital, if the re-investments be made at **3** ℔ Cent.		
	5 ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.		**5** ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.
	Years. Parts.	Years. Parts.	Years. Parts.		Years. Parts.	Years. Parts.	Years. Parts.
15 15	17 21	14 68	12 80	**25** 35	15 95	13 75	12 09
20	17 03	14 56	12 71	40	15 75	13 69	11 98
25	16 86	14 43	12 61	45	15 55	13 46	11 86
30	16 69	14 31	12 51	50	15 36	13 31	11 75
35	16 56	14 20	12 44	55	15 17	13 17	11 64
40	16 39	14 08	12 34	60	15 04	13 07	11 56
45	16 23	13 97	12 25	65	14 92	12 99	11 49
50	16 10	13 87	12 18	70	14 81	12 90	11 43
55	15 97	13 77	12 11	75	14 75	12 85	11 39
60	15 85	13 68	12 03	80	14 70	12 82	11 36
65	15 77	13 62	11 99	85	14 66	12 79	11 34
70	15 70	13 57	11 95	90	14 66	12 79	11 34
75	15 65	13 53	11 92	**3030**	15 90	13 72	12 06
80	15 62	13 51	11 90	35	15 65	13 53	11 92
85	15 60	13 49	11 89	40	15 41	13 35	11 78
90	15 58	13 48	11 88	45	15 17	13 17	11 64
20 20	16 83	14 41	12 59	50	14 95	13 00	11 51
25	16 64	14 26	12 48	55	14 73	12 84	11 38
30	16 45	14 12	12 38	60	14 56	12 71	11 27
35	16 26	13 99	12 27	65	14 41	12 59	11 18
40	16 08	13 85	12 16	70	14 31	12 51	11 12
45	15 92	13 74	12 08	75	14 20	12 44	11 06
50	15 75	13 60	11 98	80	14 16	12 41	11 04
55	15 60	13 49	11 89	85	14 12	12 38	11 01
60	15 48	13 40	11 82	90	14 10	12 36	11 00
65	15 38	13 33	11 76	**3535**	15 34	13 30	11 74
70	15 29	13 26	11 71	40	15 06	13 09	11 57
75	15 24	13 23	11 68	45	14 77	12 87	11 40
80	15 20	13 19	11 65	50	14 49	12 66	11 23
85	15 17	13 17	11 64	55	14 24	12 47	11 09
90	15 15	13 16	11 63	60	14 04	12 31	10 96
25 25	16 39	14 08	12 34	65	13 89	12 19	10 87
30	16 18	13 93	12 22	70	13 74	12 08	10 77

PRESENT WORTH OF PROPERTY, either LEASE, ESTATE, or ANNUITY, held on the LONGEST of TWO LIVES, according to the **CARLISLE** Table of Mortality.

Supposing the Purchaser thereof to take out of the Annuity £5 ℘ cent., £6 ℘ cent., or £7 ℘ cent. per Annum, as available Interest on his PURCHASE MONEY, or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such Interest, so as to make 3 ℘ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The Answers show the value in Pounds of each £100 of NET INCOME, as well as the number of years' purchase.

YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.

Ages of the Lives.	The available Interest on Capital, if the re-investments be made at 3 ℘ Cent.			Ages of the Lives.	The available Interest on Capital, if the re-investments be made at 3 ℘ Cent.		
	5 ℘ Cent.	**6** ℘ Cent.	**7** ℘ Cent.		**5** ℘ Cent.	**6** ℘ Cent.	**7** ℘ Cent.
	Years. Parts.	Years. Parts.	Years. Parts.		Years. Parts.	Years. Parts.	Years. Parts.
35 75	13 64	12 00	10 72	**50** 85	11 23	10 10	9 17
80	13 59	11 96	10 68	90	11 21	10 08	9 16
85	13 55	11 93	10 66	**55 55**	11 96	10 68	9 65
90	13 51	11 90	10 64	60	11 41	10 24	9 29
40 40	14 68	12 80	11 35	65	11 00	9 91	9 02
45	14 37	12 56	11 16	70	10 64	9 61	8 77
50	14 02	12 30	10 95	75	10 38	9 41	8 60
55	13 72	12 06	10 76	80	10 22	9 28	8 49
60	13 46	11 86	10 60	85	10 11	9 18	8 41
65	13 26	11 71	10 48	90	10 06	9 14	8 37
70	13 11	11 59	10 38	**60 60**	10 75	9 71	8 85
75	12 99	11 49	10 31	65	10 20	9 26	8 47
80	12 90	11 43	10 26	70	9 71	8 85	8 13
85	12 85	11 39	10 22	75	9 35	8 55	7 88
90	12 84	11 38	10 21	80	9 12	8 36	7 72
45 45	13 95	12 24	10 90	85	8 96	8 22	7 60
50	13 55	11 93	10 66	90	8 87	8 15	7 53
55	13 17	11 64	10 43	**65 65**	9 54	8 71	8 01
60	12 85	11 39	10 22	70	8 91	8 18	7 56
65	12 61	11 20	10 07	75	8 45	7 79	7 23
70	12 42	11 05	9 95	80	8 15	7 53	7 01
75	12 28	10 94	9 86	85	7 94	7 35	6 85
80	12 21	10 88	9 81	90	7 83	7 26	6 77
85	12 13	10 82	9 76	**70 70**	8 12	7 51	6 98
90	12 12	10 81	9 76	75	7 51	6 98	6 53
50 50	13 05	11 55	10 35	80	7 09	6 62	6 21
55	12 58	11 17	10 05	85	6 77	6 34	5 96
60	12 15	10 83	9 77	90	6 62	6 21	5 84
65	11 85	10 59	9 58	**75 75**	6 74	6 31	5 94
70	11 59	10 38	9 41	80	6 21	5 85	5 52
75	11 41	10 24	9 29	85	5 77	5 45	5 17
80	11 31	10 16	9 22	90	5 55	5 26	5 00

TABLE VII.

Present Worth of Property, either Lease, Estate, or Annuity, held on the Longest of Three Lives, according to the Carlisle Table of Mortality.

☞ The Answers show the value of each £100 of net income, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his capital, provided he can reinvest the surplus income, beyond the interest on the purchase-money, at the same rate of interest.

Ages of the Lives.	Years' Purchase, or Pounds for each £100 a Year. 3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	Ages of the Lives.
10 10 10	27.79	22.88	19.04	16.17	10 10 10
20	27.88	22.62	18.69	16.18	20
30	27.56	22.46	18.77	16.03	30
40	27.35	22.32	18.66	15.94	40
50	27.35	22.38	18.55	15.86	50
60	27.86	22.31	18.51	15.82	60
70	27.82	22.89	19.41	15.83	70
10 15 15	27.84	22.65	18.90	16.18	10 15 15
25	27.47	22.40	18.75	16.08	25
35	27.32	22.31	18.62	15.90	35
45	25.92	22.08	18.50	15.95	45
55	26.75	21.92	18.30	15.76	55
65	26.67	21.88	18.25	15.73	65
75	26.64	21.85	18.35	15.72	75
10 20 20	27.27	22.27	18.71	15.99	10 20 20
30	26.99	22.18	18.95	15.98	30
40	26.49	21.95	18.44	15.89	40
50	26.48	21.72	18.22	15.73	50
60	26.36	21.09	18.25	15.62	60
70	26.30	21.65	18.35	15.67	70
10 25 25	26.95	22.11	18.44	15.88	10 25 25
35	26.55	21.87	18.40	15.78	35
45	26.28	21.61	18.25	15.68	45
55	26.06	21.51	18.14	15.68	55
65	25.98	21.45	18.09	15.55	65
75	25.95	21.42	18.08	15.55	75
10 30 30	26.28	21.95	18.48	15.56	10 30 30
40	26.13	21.58	18.24	15.65	40
50	25.84	21.38	18.08	15.57	50
60	25.78	21.27	17.99	15.49	60
70	25.63	21.23	17.96	15.47	70

E. G. A Lease or Annuity held on the existence of Three Lives 10, 30, and 60, that is, as long as any one of the three shall exist; the present worth at 5 ℘ cent. is 17.99, or 18 years' purchase of the net income; and the present worth of each £100 of net income is £1799.

If calculated at 6 ℘ cent., the present worth is 15.49, or 15½ years' purchase; and the present worth of each £100 of net income is £1549.

PRESENT WORTH OF PROPERTY, either LEASE, ESTATE, OR ANNUITY, held on the LONGEST OF THREE LIVES, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N. B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY, at the same rate of interest.

Ages of the Lives.	Years' Purchase, or Pounds for each £100 a Year.				Ages of the Lives.
	3 ₱ Cent.	4 ₱ Cent.	5 ₱ Cent.	6 ₱ Cent.	
	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
10 35 35	26 08	21 56	18 22	15 67	**10 35 35**
45	25 70	21 30	18 01	15 53	45
55	25 46	21 12	17 88	15 42	55
65	25 36	21 04	17 81	15 37	65
75	25 32	21 00	17 79	15 36	75
10 40 40	25 66	21 27	18 00	15 52	**10 40 40**
50	25 30	21 01	17 81	15 37	50
60	25 12	20 88	17 72	15 30	60
70	25 03	20 80	17 66	15 26	70
10 45 45	25 25	20 98	17 80	15 38	**10 45 45**
55	24 94	20 75	17 63	15 25	55
65	24 80	20 64	17 53	15 16	65
75	24 74	20 59	17 49	15 13	75
10 50 50	24 87	20 70	17 58	15 20	**10 50 50**
60	24 62	20 51	17 43	15 08	60
70	24 50	20 41	17 35	15 02	70
10 55 55	24 55	20 45	17 40	15 07	**10 55 55**
65	24 33	20 27	17 26	14 95	65
75	24 24	20 20	17 19	14 89	75
10 60 60	24 27	20 23	17 22	14 93	**10 60 60**
70	24 08	20 07	17 09	14 82	70
10 65 65	24 03	20 04	17 05	14 78	**10 65 65**
75	23 90	19 92	16 96	14 71	75
10 70 70	23 85	19 88	16 93	14 68	**10 70 70**
10 75 75	23 72	19 76	16 83	14 59	**10 75 75**
15 20 20	27 06	22 20	18 64	15 96	**15 20 20**
30	26 60	21 92	18 47	15 86	30
40	26 27	21 71	18 33	15 75	40
50	26 01	21 51	18 18	15 64	50
60	25 89	21 42	18 10	15 58	60
70	25 82	21 36	18 05	15 54	70
15 30 30	26 05	21 59	18 26	15 73	**15 30 30**
40	25 62	21 30	18 06	15 58	40
50	25 30	21 06	17 88	15 45	50
60	25 14	20 94	17 79	15 38	60
70	25 06	20 87	17 73	15 32	70

PRESENT WORTH of PROPERTY, either LEASE, ESTATE, or ANNUITY, held on the LONGEST of THREE LIVES, according to the CARLISLE Table of Mortality.

☞ The Amounts show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest the surplus amount, beyond the interest, at the [illegible], at the same rate of interest.

Ages of the Lives.	Years' Purchase, or Pounds for each £100 a Year. 3 p Cent.	4 p Cent.	5 p Cent.	6 p Cent.	Ages of the Lives.
	Years Parts	Years Parts	Years Parts	Years Parts	
15 40 40	25·06	20·93	17·82	15·32	15 40 40
50	24·68	20·61	17·59	15·23	50
60	24·47	20·49	17·49	15·15	60
70	24·37	20·35	17·48	15·09	70
15 50 50	24·18	20·27	17·33	15·05	15 50 50
60	23·90	20·06	17·16	14·91	60
70	23·76	19·94	17·06	14·83	70
15 60 60	23·49	19·74	16·90	14·71	15 60 60
70	23·27	19·56	16·75	14·58	70
15 70 70	23·00	19·32	16·56	14·45	15 70 70
20 20 20	26·78	22·06	18·54	15·89	20 20 20
30	26·25	21·73	18·35	15·78	30
40	25·87	21·47	18·18	15·66	40
50	25·58	21·25	18·01	15·53	50
60	25·44	21·14	17·93	15·41	60
70	25·37	21·08	17·88	15·45	70
20 30 30	25·62	21·34	18·11	15·61	20 30 30
40	25·13	21·08	17·90	15·49	40
50	24·76	20·13	17·60	15·32	50
60	24·58	20·08	17·57	15·24	60
70	24·48	19·52	17·51	15·19	70
20 40 40	24·51	20·29	17·60	15·28	20 40 40
50	24·80	20·25	17·35	15·09	50
60	23·92	20·08	17·21	14·96	60
70	23·70	19·98	17·13	14·92	70
20 50 50	23·49	19·94	17·04	14·86	20 50 50
60	23·17	19·68	16·86	14·72	60
70	23·01	19·46	16·74	14·62	70
20 60 60	22·71	19·24	16·57	14·49	20 60 60
70	22·47	19·00	16·48	14·35	70
20 70 70	22·16	18·77	16·18	14·17	20 70 70
30 30 30	24·81	20·57	17·63	15·48	30 30 30
40	24·16	20·43	17·32	15·24	40
50	23·83	20·04	17·24	15·03	50
60	23·43	19·82	17·11	14·93	60
70	23·32	19·76	17·05	14·85	70

PRESENT WORTH of PROPERTY, either LEASE, ESTATE, or ANNUITY, held on the LONGEST of THREE LIVES, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N. B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY, at the same rate of interest.

Ages of the Lives.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.				Ages of the Lives.
	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	
	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
30 40 40	23 34	19 85	17 14	14 98	30 40 40
50	22 72	19 39	16 80	14 73	50
60	22 42	19 16	16 62	14 58	60
70	22 26	19 03	16 51	14 49	70
30 50 50	21 97	18 84	16 39	14 42	30 50 50
60	21 55	18 53	16 14	14 23	60
70	21 34	18 35	16 00	14 11	70
30 60 60	20 95	18 05	15 77	14 93	30 60 60
70	20 62	17 78	15 54	13 74	70
30 70 70	20 21	17 44	15 25	13 50	30 70 70
40 40 40	22 34	19 18	16 69	14 68	40 40 40
50	21 48	18 55	16 21	14 32	50
60	21 05	18 22	15 96	14 12	60
70	20 83	18 04	15 81	14 00	70
40 50 50	20 41	17 72	15 65	13 90	40 50 50
60	19 83	17 33	15 29	13 62	60
70	19 55	17 09	15 10	13 46	70
40 60 60	18 99	16 67	14 78	13 21	40 60 60
70	18 56	16 31	14 48	12 96	70
40 70 70	18 02	15 86	14 10	12 65	40 70 70
50 50 50	19 05	16 77	14 89	13 33	50 50 50
60	18 20	16 12	14 39	12 94	60
70	17 76	15 76	14 08	12 69	70
50 60 60	16 95	15 14	13 62	12 33	50 60 60
70	16 30	14 60	13 17	11 95	70
50 70 70	15 48	13 92	12 60	11 47	50 70 70
60 60 60	15 21	13 76	12 53	11 46	60 60 60
70	14 16	12 88	11 79	10 83	70
60 70 70	12 83	11 77	10 86	10 04	60 70 70
70 70 70	10 98	10 20	9 49	8 86	70 70 70

E. G. A LEASE or ANNUITY held on the LONGEST of THREE LIVES 40, 50, and 70, that is, so long as any one of the three shall exist: the PRESENT WORTH at **4** ℔ cent. is 17 09, or just above 17 years' purchase of the NET INCOME; and the present worth of each £100 of NET INCOME is £1709. If calculated at **6** ℔ cent., the present worth is 13 46, or 13½ years' purchase; and the present worth of each £100 of NET INCOME is £1346.

PRESENT WORTH of PROPERTY, either LEASE, ESTATE, or ANNUITY, held on the LONGEST of THREE LIVES, according to the **CARLISLE** Table of Mortality.

Supposing the Purchaser thereof to take out of the Annuity £5 ℔ cent., £6 ℔ cent., or £7 ℔ cent. per Annum, as available Interest on his PURCHASE MONEY, or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such Interest, so as to make 3 ℔ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The Answers show the value in Pounds of each £100 of NET INCOME, as well as the number of years' purchase.

Ages of the Lives.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR. The available Interest on Capital, if the re-investments be made at **3** ℔ Cent. **5** ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.	Ages of the Lives.	The available Interest on Capital, if the re-investments be made at **3** ℔ Cent. **5** ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.
	Yrs. Pts.	Yrs. Pts.	Yrs. Pts.		Yrs. Pts.	Yrs. Pts.	Yrs. Pts.
10 10 10	18 03	15 31	13 28	**10 25 25**	17 51	14 90	12 97
20	17 89	15 17	13 17	35	17 33	14 77	12 87
30	17 76	15 08	13 11	45	17 21	14 68	12 80
40	17 67	15 01	13 05	55	17 12	14 62	12 75
50	17 60	14 97	13 02	65	17 09	14 60	12 74
60	17 57	14 95	13 00	75	17 09	14 60	12 74
70	17 54	14 92	12 99	**10 30 30**	17 33	14 77	12 87
10 15 15	17 89	15 17	13 17	40	17 15	14 64	12 77
25	17 70	15 04	13 07	50	17 03	14 56	12 71
35	17 57	14 95	13 00	60	16 98	14 51	12 67
45	17 51	14 90	12 97	70	16 95	14 49	12 66
55	17 42	14 84	12 92	**10 35 35**	17 15	14 64	12 77
65	17 39	14 81	12 90	45	16 98	14 51	12 67
75	17 39	14 81	12 90	55	16 86	14 43	12 61
10 20 20	17 70	15 04	13 07	65	16 83	14 41	12 59
30	17 51	14 90	12 97	75	16 81	14 39	12 58
40	17 39	14 81	12 90	**10 40 40**	16 95	14 49	12 66
50	17 30	14 75	12 85	50	16 81	14 39	12 58
60	17 27	14 73	12 84	60	16 72	14 33	12 53
70	17 24	14 70	12 82	70	16 69	14 31	12 51

E.G. The PRESENT WORTH of an ANNUITY, held on the LONGEST of THREE LIVES, 10, 30, and 60—that is, so long as any one of the three shall exist—if the Purchaser is to make **6** ℔ cent. on the purchase-money, and re-invest the surplus at **3** ℔ cent. to replace capital, is 14 51 or 14½ years' purchase of the NET INCOME, and the present worth of each £100 of NET INCOME is £1451.

If it be requ'red to make **7** ℔ cent. on the purchase-money, and re-invest the surplus at **3** per cent., the present worth is 12 67 or 12⅔ years' purchase of the NET INCOME, and the present worth of each £100 of NET INCOME is £1267.

PRESENT WORTH OF PROPERTY, either LEASE, ESTATE, or ANNUITY, held on the LONGEST OF THREE LIVES, according to the **CARLISLE** Table of Mortality.

Supposing the Purchaser thereof to take out of the Annuity £5 ℔ cent., £6 ℔ cent., or £7 ℔ cent. per Annum, as available Interest on his PURCHASE MONEY, or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such Interest, so as to make 3 ℔ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The Answers show the value in Pounds of each £100 of NET INCOME, as well as the number of years' purchase.

	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.						
	The available Interest on Capital, if the re-investments be made at **3** ℔ Cent.				The available Interest on Capital, if the re-investments be made at **3** ℔ Cent.		
Ages of the Lives.	**5** ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.	Ages of the Lives.	**5** ℔ Cent.	**6** ℔ Cent.	**7** ℔ Cent.
	Yrs. Pts.	Yrs. Pts.	Yrs. Pts.		Yrs. Pts.	Yrs. Pts.	Yrs. Pts.
10 25 25	16 78	14 37	12 56	**15 40 40**	16 69	14 31	12 51
55	16 61	14 26	12 48	50	16 53	14 18	12 42
65	16 58	14 22	12 45	60	16 42	14 10	12 36
75	16 56	14 20	12 44	70	16 39	14 08	12 34
10 50 50	16 61	14 24	12 47	**15 50 50**	16 31	14 02	12 30
60	16 50	14 16	12 41	60	16 18	13 93	12 22
70	16 45	14 12	12 38	70	16 10	13 87	12 18
10 55 55	16 47	14 14	12 39	**15 60 60**	15 97	13 77	12 11
65	16 37	14 06	12 33	70	15 87	13 70	12 05
75	16 34	14 04	12 31	**15 70 70**	15 75	13 69	11 98
10 60 60	16 34	14 04	12 31	**20 20 20**	17 45	14 86	12 94
70	16 26	13 99	12 27	30	17 21	14 68	12 80
10 65 65	16 23	13 97	12 25	40	17 06	14 53	12 72
75	16 18	13 93	12 22	59	16 92	14 47	12 64
10 70 70	16 15	13 91	12 21	60	16 86	14 43	12 61
10 75 75	16 10	13 87	12 18	70	16 83	14 41	12 59
15 20 20	17 57	14 95	13 00	**20 30 30**	16 95	14 49	12 66
30	17 36	14 79	12 89	40	16 72	14 33	12 53
40	17 21	14 68	12 80	50	16 56	14 20	12 44
50	17 12	14 62	12 75	60	16 47	14 14	12 39
60	17 06	14 58	12 72	70	16 45	14 12	12 38
70	17 03	14 56	12 71	**20 40 40**	16 45	14 12	12 38
15 30 30	17 12	14 62	12 75	50	16 23	13 97	12 25
40	16 95	14 49	12 66	60	16 13	13 89	12 19
50	16 81	14 39	12 58	70	16 08	13 85	12 16
60	16 72	14 33	12 53				
70	16 69	14 31	12 51				

Present Worth of Property, either **Lease, Estate**, or **Annuity**, held on the **Longest of Three Lives**, according to the **CARLISLE** Table of Mortality.

Supposing the Purchaser thereof to take out of the Annuity £5 ℔ cent., £6 ℔ cent., or £7 ℔ cent. per Annum, as available Interest on his **Purchase Money**, or **Capital** advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond such interest, so as to make 3 ℔ cent. thereof, in order to replace the Purchase Money or Capital.

☞ The Answers show the value in Pounds of each £100 of NET INCOME, as well as the number of years' purchase.

Years' Purchase, or Pounds for each £100 a Year.

Ages of the Lives.	The available interest on Capital, if the re-investments be made at **3** ℔ Cent. 5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.
	Yrs. Pts.	Yrs. Pts.	Yrs. Pts.
20 50 50	15 97	13 77	12 11
60	15 85	13 68	12 03
70	15 77	13 62	11 99
20 60 60	15 62	13 51	11 90
70	15 50	13 42	11 83
20 70 70	15 36	13 31	11 75
30 30 30	16 58	14 22	12 45
40	16 31	14 02	12 30
50	16 05	13 83	12 15
60	15 97	13 77	12 11
70	15 90	13 72	12 06
30 40 40	15 92	13 74	12 08
50	15 62	13 51	11 90
60	15 48	13 40	11 82
70	15 41	13 35	11 78
30 50 50	15 27	13 24	11 69
60	15 06	13 09	11 57
70	14 95	13 00	11 51
30 60 60	14 77	12 87	11 40
70	14 60	12 74	11 30
30 70 70	14 39	12 58	11 17

Ages of the Lives.	The available interest on Capital, if the re-investments be made at **3** ℔ Cent. 5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.
	Yrs. Pts.	Yrs. Pts.	Yrs. Pts.
40 40 40	15 43	13 37	11 79
50	15 04	13 07	11 56
60	14 81	12 90	11 43
70	14 70	12 82	11 36
40 50 50	14 49	12 66	11 23
60	14 20	12 44	11 06
70	14 06	12 33	10 98
40 60 60	13 77	12 11	10 80
70	13 53	11 92	10 65
40 70 70	13 24	11 69	10 47
50 50 50	13 79	12 12	10 81
60	13 35	11 78	10 54
70	13 11	11 59	10 38
50 60 60	12 66	11 23	10 10
70	12 30	10 95	9 87
50 70 70	11 82	10 57	9 56
60 60 60	11 67	10 45	9 46
70	11 04	9 94	9 04
60 70 70	10 21	9 27	8 48
70 70 70	9 00	8 26	7 63

E.G. The **Present Worth of an Annuity**, held on the **Longest of Three Lives**, 20, 50, and 60—that is, so long as any one of the three shall exist—if the Purchaser is to make **6** ℔ cent. on the purchase-money, and re-invest the surplus at **3** ℔ cent. to replace capital, is 13 68 or 13⅔ years' purchase of the NET INCOME, and the present worth of each £100 of NET INCOME is £1368.

If it be required to make **7** ℔ cent. on the purchase-money, and re-invest the surplus at **3** ℔ cent., the present worth is 12 03, or about 12 years' purchase of the NET INCOME, and the present worth of each £100 of NET INCOME is £1203.

TABLE VIII.

TABLE showing the period ANNUITANTS should live, in order to be re-imbursed the amount of the PURCHASE-MONEY paid for ANNUITIES or INCOMES contingent upon Life.

Years' Purchase given for a Life or Lives.	CONTINUANCE OF THE LIVES TO RE-IMBURSE THE ANNUITANTS THEIR PURCHASE-MONEY.							Years' Purchase given for a Life or Lives.
	3 ℔ Cent.	3½ ℔ Cent.	4 ℔ Cent.	4½ ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	
	Years.	Years.	Years.	Years.	Years.	Years.	Years.	
5	5½	5¾	5¾	6	6	6¼	6½	5
5½	6¼	6¼	6½	6½	6¾	7	7½	5½
6	6¾	7	7	7¼	7½	7¾	8¼	6
6½	7½	7¾	7¾	8	8¼	8½	9	6½
7	8	8¼	8½	8¾	9	9½	10	7
7½	8¾	9	9¼	9½	9¾	10½	11	7½
8	9½	9¾	10	10¼	10½	11¼	12¼	8
8½	10	10½	10¾	11	11½	12¼	13½	8½
9	10¾	11	11½	12	12½	13½	14¾	9
9½	11½	11¾	12¼	12¾	13½	14½	16¼	9½
10	12¼	12¾	13½	13¾	14½	15¾	18	10
10½	13	13½	14	14¾	15½	17½	19¾	10½
11	13¾	14½	15	15¾	16½	18¾	21¾	11
11½	14½	15	15¾	16¾	17¾	20¼	24½	11½
12	15¼	16	16¾	17¾	19	22	27½	12
12½	16	16¾	17¾	19	20½	24	30¾	12½
13	16¾	17¾	18¾	20	21¾	26	35¾	13
13½	17¾	18¾	20	21¼	23½	28½	43	13½
14	18½	19¾	21	22¾	24¾	31½	58	14
14½	19½	20¾	22¼	24¼	26½	35¼		14½
15	20½	21¾	23½	25¾	28½	39¾		15
15½	21½	22¾	24½	27¼	30¾	45¾		15½
16	22½	24	26¼	29	33	55¼		16
16½	23½	25½	27¾	31	35¾	79¼		16½
17	24½	26½	29½	33	39			17
17½	25½	27¾	30¾	35½	42¾			17½
18	26½	29	32½	37¾	47½			18
18½	27½	30½	34½	40¾	53¾			18½
19	28¾	32	36½	44	61½			19
19½	29¾	33½	38¾	47¾	75¾			19½
20	31	35	41½	52½				20

E. G. A party having paid 10 years' purchase for an ANNUITY, in order to make 4 ℔ cent. on the PURCHASE-MONEY he must enjoy the Annuity 13½ years. For instance, if he paid £1000, or 10 years' purchase for £100 a year: after allowing, out of the Income, £40 for the use of the money, he invests the £60 at the same rate of Interest, viz. 4 ℔ cent., to form a SINKING FUND. In 13½ years it would amount to more than £1000, and thereby replace the CAPITAL expended in the purchase.

N.B. If the re-investment took place at only 3 ℔ cent., 14 years would be required.

TABLE of CENTENARIANS, who reached the age of 100 and upwards. By C. BABBAGE, Esq.

N.B. All died previous to the year 1800.

Ages.	Number alive.	Die in Next Year.	Ages.	Number alive.	Die in Next Year.	Ages.	Number alive.	Die in Next Year.
100	1751	164	**120**	143	17	**140**	12	2
101	1587	145	121	126	14	141	10	1
102	1442	162	122	112	13	142	9	1
103	1280	154	123	99	11	143	8	1
104	1126	150	124	88	9	144	7	1
105	976	140	125	79	8	145	6	1
106	836	120	126	71	8	146	5	1
107	716	94	127	63	7	147	4	1
108	622	80	128	56	6	148	3	1
109	542	69	129	50	6	149	2	1
110	473	57	**130**	44	5	**150**	1	1
111	416	48	131	39	4			
112	368	40	132	35	4			
113	328	34	133	31	3			
114	294	31	134	28	3			
115	263	29	135	25	3			
116	234	25	136	22	3			
117	209	24	137	19	3			
118	185	22	138	16	2			
119	163	20	139	14	2			

COMPARATIVE VIEW of the Duration of Life among Centenarians.

Of persons who have attained the Age of	There die before the Age of	* By Haller's Table.	† By Easton's Table.	By Babbage's Table.
100	110	1000	1310	1278
110	120	60	277	330
120	130	29	84	99
130	140	15	26	32
140	150	6	7	12
150	160	1	3	
160	170		2	
170	above		3	
		1111	1712	1751

* See Hufeland's 'Art of Prolonging Life.'
† See James Easton's Work on 'Human Longevity.'

☞ The above Tables are from C. Babbage's 'Comparative View,' &c. of Life Assurance Offices, 1826.

PRESENT WORTH of the REVERSION to a FREEHOLD ESTATE, after the LONGEST of TWO LIVES of given ages, according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY, at the same rate of interest.

Ages of the Lives.	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.
	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.			
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.
5 5	5 76	2 62	1 33	74
10	6 00	2 74	1 39	77
15	6 35	2 95	1 52	85
20	6 67	3 14	1 64	93
25	6 99	3 35	1 78	1 02
30	7 30	3 56	1 91	1 12
35	7 59	3 76	2 06	1 21
40	7 89	3 97	2 21	1 32
45	8 16	4 16	2 35	1 43
50	8 43	4 37	2 51	1 56
55	8 70	4 58	2 68	1 70
60	8 92	4 77	2 84	1 93
65	9 09	4 91	2 96	1 98
70	9 25	5 05	3 08	2 03
75	9 37	5 16	3 18	2 12
80	9 45	5 23	3 24	2 18
85	9 51	5 29	3 29	2 23
90	9 54	5 32		
10 10	6 27	2 88	1 46	80
15	6 65	3 10	1 60	89
20	7 00	3 32	1 73	98
25	7 34	3 54	1 88	1 07
30	7 67	3 75	2 02	1 17
35	7 98	3 96	2 17	1 27
40	8 28	4 18	2 32	1 38
45	8 56	4 38	2 47	1 49
50	8 83	4 58	2 62	1 61
55	9 08	4 78	2 78	1 74
60	9 29	4 95	2 92	1 85
65	9 44	5 08	3 03	1 95
70	9 57	5 19	3 12	2 03
75	9 66	5 27	3 20	2 09
80	9 72	5 32	3 24	2 13
85	9 76	5 36	3 27	2 16
90	9 77	5 37	3 29	2 18
15 15	7 08	3 36	1 76	99
20	7 48	3 60	1 91	1 09
25	7 88	3 86	2 08	1 20
30	8 26	4 11	2 24	1 31
35	8 61	4 35	2 41	1 43
40	8 95	4 59	2 58	1 56
45	9 27	4 82	2 75	1 68
15 50	9 58	5 06	2 93	1 82
55	9 87	5 29	3 12	1 97
60	10 11	5 48	3 28	2 10
65	10 29	5 63	3 40	2 21
70	10 44	5 77	3 52	2 31
75	10 55	5 86	3 60	2 38
80	10 62	5 92	3 66	2 43
85	10 67	5 97	3 70	2 47
90	10 69	5 99	3 72	2 49
20 20	7 94	3 88	2 09	1 20
25	8 39	4 17	2 28	1 33
30	8 83	4 46	2 47	1 46
35	9 24	4 74	2 66	1 59
40	9 63	5 01	2 84	1 73
45	9 98	5 27	3 04	1 87
50	10 33	5 54	3 25	2 03
55	10 66	5 80	3 46	2 20
60	10 93	6 02	3 64	2 35
65	11 13	6 19	3 78	2 47
70	11 30	6 33	3 91	2 58
75	11 42	6 44	4 00	2 66
80	11 50	6 51	4 06	2 72
85	11 55	6 56	4 10	2 76
90	11 58	6 58	4 13	2 78
25 25	8 92	4 51	2 49	1 47
30	9 42	4 84	2 71	1 62
35	9 89	5 16	2 93	1 77
40	10 35	5 48	3 16	1 94
45	10 76	5 78	3 38	2 10
50	11 16	6 08	3 62	2 29
55	11 53	6 38	3 85	2 47
60	11 84	6 63	4 06	2 65
65	12 08	6 83	4 23	2 79
70	12 28	7 00	4 38	2 92
75	12 42	7 12	4 48	3 01
80	12 50	7 20	4 55	3 08
85	12 57	7 26	4 61	3 13
90	12 60	7 29	4 63	3 15
30 30	10 00	5 22	2 97	1 80
35	10 55	5 60	3 23	1 98
40	11 08	5 97	3 49	2 17

YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.

Ages of the Lives.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.
30 45	11 56	6 32	3 75	2 36
50	12 02	6 67	4 02	2 57
55	12 46	7 01	4 29	2 79
60	12 81	7 30	4 53	2 99
65	13 08	7 53	4 72	3 14
70	13 31	7 73	4 89	3 29
75	13 48	7 87	5 02	3 41
80	13 58	7 96	5 10	3 48
85	13 65	8 03	5 17	3 54
90	13 69	8 06	5 20	3 57
35 35	11 19	6 03	3 52	2 18
40	11 80	6 47	3 84	2 41
45	12 37	6 87	4 14	2 63
50	12 91	7 28	4 45	2 87
55	13 41	7 68	4 76	3 13
60	13 82	8 01	5 04	3 35
65	14 12	8 26	5 25	3 53
70	14 38	8 49	5 45	3 70
75	14 57	8 65	5 59	3 83
80	14 68	8 76	5 68	3 91
85	14 76	8 83	5 75	3 98
90	14 80	8 87	5 79	4 01
40 40	12 53	6 98	4 20	2 67
45	13 19	7 46	4 56	2 94
50	13 84	7 95	4 93	3 23
55	14 44	8 42	5 31	3 53
60	14 92	8 82	5 63	3 79
65	15 28	9 11	5 88	4 00
70	15 58	9 37	6 10	4 20
75	15 79	9 56	6 27	4 35
80	15 93	9 68	6 38	4 45
85	16 02	9 77	6 46	4 52
90	16 07	9 81	6 50	4 56
45 45	13 98	8 03	4 98	3 25
50	14 75	8 62	5 43	3 60
55	15 46	9 18	5 87	3 96
60	16 04	9 65	6 26	4 27
65	16 46	10 00	6 55	4 52
70	16 81	10 30	6 81	4 74
75	17 05	10 51	6 99	4 90
80	17 19	10 64	7 11	5 01
85	17 30	10 73	7 20	5 09
90	17 34	10 78	7 24	5 13
50 50	15 67	9 32	5 97	4 02
55	16 54	10 01	6 52	4 46

Ages of the Lives.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.
50 60	17 27	10 60	7 00	4 86
65	17 80	11 04	7 37	5 17
70	18 24	11 42	7 70	5 45
75	18 54	11 68	7 93	5 65
80	18 72	11 84	8 07	5 78
85	18 84	11 95	8 17	5 88
90	18 89	12 00	8 22	5 92
55 55	17 62	10 87	7 20	5 01
60	18 53	11 61	7 82	5 52
65	19 23	12 19	8 30	5 93
70	19 82	12 70	8 55	6 32
75	20 22	13 06	9 06	6 60
80	20 48	13 29	9 27	6 78
85	20 66	13 45	9 41	6 92
90	20 73	13 52	9 48	6 98
60 60	19 64	12 53	8 57	6 15
65	20 51	13 25	9 19	6 67
70	21 28	13 92	9 77	7 18
75	21 83	14 40	10 19	7 56
80	22 17	14 71	10 47	7 81
85	22 42	14 94	10 69	8 01
90	22 54	15 05	10 79	8 10
65 65	21 54	14 12	9 92	7 30
70	22 48	14 94	10 63	7 92
75	23 16	15 53	11 17	8 39
80	23 59	15 92	11 52	8 71
85	23 90	16 21	11 78	8 95
90	24 05	16 34	11 90	9 07
70 70	23 64	15 95	11 52	8 70
75	24 50	16 71	12 20	9 31
80	25 07	17 23	12 67	9 73
85	25 50	17 62	13 03	10 07
90	25 70	17 81	13 20	10 23
75 75	25 54	17 64	13 04	10 06
80	26 14	18 28	13 62	10 59
85	26 81	18 80	14 10	11 04
90	27 08	19 06	14 34	11 27
80 80	27 06	19 02	14 29	11 21
85	27 73	19 64	14 87	11 75
90	28 06	19 95	15 16	12 02
85 85	28 53	20 39	5 56	12 40
90	28 94	20 77	15 93	12 74
90 90	29 42	21 23	16 37	13 16

E.G. The PRESENT WORTH of the REVERSION to a FREEHOLD ESTATE after the LONGEST of TWO LIVES 65 and 80, or when both are dead, is at **4** ℔ cent. 15 92, or nearly 16 years' purchase of the NET INCOME; and the present worth of each £100 of NET INCOME is £1592.

If calculated at **5** ℔ cent., the present worth is 11 52, or $11\frac{1}{2}$ years' purchase; and the present worth of each £100 of NET INCOME is £1152.

PRESENT WORTH of the REVERSION to a FREEHOLD ESTATE or a PERPETUITY after any given number of years not exceeding 70.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N. B. By this Table is seen, opposite each number of years, the amount which at the respective rates of interest will, with Compound Interest at the same rate, amount to the full value of the PROPERTY at the end of the given number of years, when possession is to be obtained.

After these years.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 OF NET INCOME. 3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	8 ℘ Cent.	10 ℘ Cent.	After these years.
	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
1	32 36	24 04	19 05	15 72	11 57	9 09	**1**
2	31 42	23 11	18 14	14 83	10 71	8 26	2
3	30 50	22 22	17 27	13 99	9 92	7 51	3
4	29 61	21 37	16 45	13 20	9 19	6 83	4
5	28 75	20 55	15 67	12 45	8 51	6 21	5
6	27 91	19 76	14 92	11 75	7 88	5 64	6
7	27 10	19 00	14 21	11 08	7 29	5 13	7
8	26 31	18 27	13 53	10 45	6 75	4 66	8
9	25 55	17 56	12 89	9 86	6 25	4 24	9
10	24 80	16 89	12 28	9 30	5 79	3 85	**10**
11	24 08	16 24	11 69	8 78	5 36	3 50	11
12	23 38	15 61	11 13	8 28	4 96	3 18	12
13	22 70	15 01	10 60	7 81	4 59	2 89	13
14	22 04	14 43	10 10	7 37	4 25	2 63	14
15	21 39	13 88	9 62	6 95	3 94	2 39	15
16	20 77	13 35	9 16	6 56	3 65	2 17	16
17	20 17	12 83	8 72	6 19	3 38	1 98	17
18	19 58	12 34	8 31	5 84	3 13	1 80	18
19	19 01	11 86	7 91	5 51	2 89	1 63	19
20	18 45	11 41	7 54	5 19	2 68	1 48	**20**
21	17 92	10 97	7 18	4 90	2 48	1 35	21
22	17 39	10 55	6 84	4 62	2 30	1 23	22
23	16 89	10 14	6 51	4 36	2 13	1 11	23
24	16 40	9 75	6 20	4 11	1 97	1 01	24
25	15 92	9 38	5 90	3 88	1 82	92	25
26	15 45	9 02	5 62	3 66	1 69	84	26
27	15 00	8 67	5 36	3 45	1 56	76	27
28	14 57	8 33	5 10	3 26	1 45	69	28
29	14 14	8 01	4 86	3 07	1 34	63	29
30	13 73	7 71	4 63	2 90	1 24	57	**30**
31	13 33	7 41	4 41	2 74	1 15	52	31
32	12 94	7 12	4 20	2 58	1 06	47	32

E.G. The PRESENT WORTH of the REVERSION to a FREEHOLD ESTATE after **14** years at **5** ℘ cent. is 10 10, or a little more than 10 years' purchase of the NET INCOME; and the present worth of each £100 of NET INCOME is £1010.

If calculated at **8** ℘ cent., the present worth is 4 25, or $4\frac{1}{4}$ years' purchase; and the present worth of each £100 of NET INCOME is £425.

TABLE XI.—*continued.*

After these years.	Years' Purchase, or Pounds for each £100 of net income.						After these years.
	3 ⅌ Cent.	4 ⅌ Cent.	5 ⅌ Cent.	6 ⅌ Cent.	8 ⅌ Cent.	10 ⅌ Cent.	
33	12 57	6 85	4 00	2 43	99	43	33
34	12 20	6 59	3 81	2 30	91	39	34
35	11 84	6 32	3 62	2 17	84	36	35
36	11 50	6 05	3 45	2 04	78	32	36
37	11 16	5 86	3 29	1 93	73	29	37
38	10 84	5 63	3 13	1 82	67	27	38
39	10 52	5 41	2 98	1 72	62	24	39
40	10 22	5 21	2 84	1 62	57	22	**40**
41	9 92	5 00	2 70	1 54	53	20	41
42	9 63	4 81	2 57	1 44	49	18	42
43	9 35	4 62	2 45	1 36	45	16	43
44	9 08	4 45	2 33	1 29	42	15	44
45	8 81	4 28	2 22	1 21	39	14	45
46	8 56	4 11	2 12	1 14	36	12	46
47	8 31	3 96	2 02	1 08	33	11	47
48	8 06	3 80	1 92	1 01	31	10	48
49	7 83	3 66	1 83	96	29	09	49
50	7 60	3 52	1 74	90	26	09	**50**
51	7 38	3 38	1 66	85	25	08	51
52	7 17	3 25	1 58	80	23	07	52
53	6 96	3 13	1 51	76	21	06	53
54	6 75	3 00	1 43	71	19	06	54
55	6 56	2 89	1 37	67	18	05	55
56	6 37	2 78	1 30	64	17	05	56
57	6 18	2 67	1 24	60	15	04	57
58	6 00	2 57	1 18	57	14	04	58
59	5 83	2 47	1 12	53	13	03	59
60	5 66	2 38	1 07	50	12	03	**60**
61	5 49	2 29	1 02	47	11	03	61
62	5 33	2 20	97	45	10	03	62
63	5 18	2 11	92	42	10	02	63
64	5 03	2 03	88	40	09	02	64
65	4 88	1 95	84	38	08	02	65
66	4 74	1 88	80	35	08	02	66
67	4 60	1 80	76	33	07	02	67
68	4 46	1 74	72	31	07	01	68
69	4 33	1 67	69	30	06	01	69
70	4 20	1 60	65	28	06	01	**70**
Value of Perpetuity.	33 33	25 00	20 00	16 66	12 50	10 00	Value of Perpetuity.

E.G. The present worth of the Reversion to a Freehold Estate after 53 years at 5 ⅌ cent. is 1 51, or 1½ year's purchase of the net income; and the present worth of each £100 of net income is £151.

If calculated at 8 ⅌ cent., the present worth is only 21, or ⅕ of a year's purchase; and the present worth of each £100 of net income is £21.

Present Worth of a Reversionary Annuity on a Single Life, after another Single Life now in Possession, according to the Carlisle Table of Mortality.

☞ The Answers show the value of each £100 of NET ANNUITY, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which the purchaser ultimately expects to make of his money and to replace his CAPITAL, provided he should be enabled to obtain the same rate of interest, when investing for accumulation.

Age of the Life in Reversion.	Age of the Life in Possession.	Years' Purchase, or Pounds for each £100 a Year. 3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	Age of the Life in Possession.	Age of the Life in Reversion.
		Years. Parts	Years. Parts	Years. Parts	Years. Parts		
	30	6 10	4 39	3 25	2 47	30	
	35	6 91	4 99	3 70	2 82	35	
	40	7 91	5 75	4 29	3 28	40	
	45	8 91	6 52	4 88	3 75	45	
	50	10 20	7 55	5 71	4 42	50	
10	55	11 81	8 92	6 87	5 40	55	10
	60	13 55	10 39	8 14	6 50	60	
	65	14 97	11 61	9 20	7 44	65	
	70	16 61	13 10	10 54	8 64	70	
	75	18 16	14 49	11 81	9 81	75	
	80	19 25	15 49	12 74	10 67	80	
	30	4 94	3 68	2 81	2 19	30	
	35	5 66	4 22	3 21	2 50	35	
	40	6 56	4 91	3 75	2 93	40	
	45	7 49	5 62	4 30	3 36	45	
	50	8 70	6 59	5 09	4 00	50	
20	55	10 26	7 90	6 19	4 94	55	20
	60	11 91	9 32	7 42	6 01	60	
	65	13 28	10 50	8 45	6 92	65	
	70	14 90	11 95	9 75	8 09	70	
	75	16 39	13 32	11 01	9 24	75	
	80	17 47	14 31	11 92	10 09	80	
	30	3 77	2 92	2 30	1 85	30	
	35	4 35	3 36	2 64	2 11	35	
30	40	5 11	3 95	3 11	2 49	40	30
	45	5 90	4 57	3 60	2 88	45	
	50	7 00	5 46	4 32	3 46	50	
	55	8 47	6 69	5 36	4 35	55	

E. G. The PRESENT WORTH of a REVERSIONARY ANNUITY on a SINGLE LIFE aged 20, after another single life aged 75, now in possession, at 5 ℔ cent. is 11 01, or 11 years' purchase of the NET INCOME; and the present worth of each £100 of NET INCOME is £1101.

If calculated at 6 ℔ cent., the present worth is 9 24, or 9¼ years' purchase; and the present worth of each £100 of NET INCOME is £924.

Age of the Life in Reversion.	Age of the Life in Possession.	Years' Purchase, or Pounds for each £100 a Year. 3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	Age of the Life in Possession.	Age of the Life in Reversion.
		Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.		
30	60	10 03	8 03	6 53	5 37	60	30
	65	11 33	9 16	7 51	6 24	65	
	70	12 89	10 56	8 77	7 37	70	
	75	14 34	11 89	9 99	8 49	75	
	80	15 39	12 85	10 88	9 32	80	
40	30	2 69	2 17	1 78	1 47	30	40
	35	3 09	2 49	2 03	1 68	35	
	40	3 66	2 95	2 40	1 99	40	
	45	4 27	3 43	2 79	2 30	45	
	50	5 19	4 18	3 40	2 80	50	
	55	6 48	5 28	4 34	3 61	55	
	60	7 92	6 52	5 43	4 56	60	
	65	9 14	7 58	6 35	5 38	65	
	70	10 63	8 91	7 56	6 46	70	
	75	12 03	10 20	8 74	7 55	75	
	80	13 04	11 13	9 60	8 36	80	
50	30	1 75	1 47	1 25	1 08	30	50
	35	1 99	1 67	1 42	1 22	35	
	40	2 35	1 97	1 67	1 43	40	
	45	2 72	2 28	1 92	1 64	45	
	50	3 36	2 81	2 37	2 01	50	
	55	4 38	3 69	3 13	2 68	55	
	60	5 57	4 74	4 06	3 50	60	
	65	6 61	5 65	4 86	4 21	65	
	70	7 96	6 87	5 96	5 21	70	
	75	9 28	8 08	7 08	6 25	75	
	80	10 25	8 97	7 91	7 02	80	
60	30	96	84	74	66	30	60
	35	1 08	95	83	74	35	
	40	1 27	1 11	98	87	40	
	45	1 43	1 24	1 09	96	45	
	50	1 76	1 53	1 34	1 18	50	
	55	2 39	2 09	1 83	1 62	55	
	60	3 19	2 81	2 48	2 21	60	
	65	3 90	3 44	3 04	2 71	65	
	70	4 92	4 37	3 89	3 49	70	
	75	5 99	5 36	4 81	4 34	75	
	80	6 79	6 10	5 51	4 99	80	

E. G. The present worth of a Reversionary Annuity on a Single Life aged 50, after another single life aged 80, now in possession, at 4 ℔ cent. is 8 97, or close to 9 years' purchase of the net income; and the present worth of each £100 of net income is £897.

If calculated at 6 ℔ cent., the present worth is 7 02, or 7 years' purchase; and the present worth of each £100 of net income is £702.

PRESENT WORTH of the NEXT PRESENTATION to a LIVING, the Life to be nominated at the Death of the Party now in Possession; and considering the Life in Reversion to be the Youngest that can be put in, viz. 25; according to the CARLISLE Table of Mortality.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

Age of the Party in Reversion.	Age of the Party in Possession.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.						Age of the Party in Possession.
		3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	
		Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	
	30	8 54	5 75	4 03	2 94	2 22	1 72	**30**
	31	8 67	5 85	4 12	3 00	2 27	1 76	31
	32	8 80	5 96	4 20	3 07	2 32	1 80	32
	33	8 94	6 07	4 29	3 14	2 38	1 84	33
	34	9 08	6 20	4 39	3 22	2 44	1 89	34
	35	9 23	6 32	4 49	3 30	2 50	1 95	**35**
	36	9 39	6 45	4 60	3 39	2 57	2 01	36
	37	9 55	6 59	4 71	3 48	2 65	2 07	37
	38	9 71	6 72	4 82	3 57	2 72	2 13	38
	39	9 87	6 86	4 94	3 67	2 80	2 19	39
	40	10 03	7 00	5 05	3 76	2 88	2 26	**40**
	41	10 19	7 14	5 17	3 85	2 95	2 32	41
25	42	10 34	7 27	5 28	3 94	3 03	2 38	42
	43	10 50	7 40	5 39	4 03	3 10	2 43	43
	44	10 66	7 54	5 50	4 13	3 18	2 50	44
	45	10 83	7 69	5 62	4 23	3 26	2 56	**45**
	46	11 00	7 84	5 75	4 33	3 34	2 64	46
	47	11 18	8 00	5 89	4 45	3 44	2 71	47
	48	11 37	8 17	6 04	4 57	3 54	2 80	48
	49	11 58	8 36	6 20	4 71	3 67	2 91	49
	50	11 80	8 56	6 38	4 87	3 80	3 02	**50**
	51	12 02	8 77	6 57	5 04	3 95	3 15	51
	52	12 26	8 99	6 77	5 21	4 10	3 28	52
	53	12 49	9 21	6 97	5 39	4 26	3 42	53
	54	12 73	9 44	7 17	5 57	4 42	3 57	54

E. G. The PRESENT WORTH of the NEXT PRESENTATION to a LIVING, of the Youngest Life, viz. 25, to be nominated at the Death of the Party now in Possession, aged 50, at **5** ℔ cent. is 6 38, or rather more than $6\frac{1}{4}$ years' purchase; and the present worth of each £100 of NET INCOME is £638.

TABLE XIII.—*continued.*

Age of the Party in Reversion.	Age of the Party in Possession.	Years' Purchase, or Pounds for each £100 a Year. 3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	Age of the Party in Possession.
		Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
25	**55**	12 97	9 67	7 38	5 76	4 59	3 72	**55**
	56	13 21	9 90	7 60	5 96	4 77	3 87	56
	57	13 46	10 14	7 82	6 16	4 95	4 04	57
	58	13 71	10 38	8 05	6 37	5 14	4 21	58
	59	13 94	10 61	8 26	6 57	5 32	4 37	59
	60	14 16	10 82	8 46	6 75	5 48	4 52	**60**
	61	14 35	11 01	8 63	6 91	5 62	4 65	61
	62	14 54	11 19	8 81	7 06	5 77	4 78	62
	63	14 73	11 38	8 98	7 22	5 91	4 91	63
	64	14 93	11 58	9 17	7 39	6 07	5 05	64
	65	15 13	11 78	9 36	7 57	6 23	5 20	**65**
	66	15 34	11 99	9 56	7 76	6 40	5 36	66
	67	15 56	12 21	9 77	7 96	6 59	5 53	67
	68	15 78	12 43	9 99	8 17	6 78	5 71	68
	69	16 01	12 67	10 22	8 38	6 99	5 90	69
	70	16 25	12 91	10 45	8 61	7 20	6 10	**70**
	71	16 48	13 15	10 70	8 85	7 43	6 32	71
	72	16 71	13 39	10 93	9 07	7 64	6 52	72
	73	16 91	13 60	11 14	9 28	7 84	6 71	73
	74	17 09	13 79	11 33	9 46	8 01	6 88	74
	75	17 24	13 94	11 48	9 61	8 16	7 01	**75**
	76	17 39	14 09	11 63	9 75	8 30	7 14	76
	77	17 52	14 24	11 77	9 89	8 43	7 27	77
	78	17 66	14 38	11 92	10 03	8 56	7 39	78
	79	17 81	14 54	12 08	10 19	8 71	7 54	79
	80	17 95	14 69	12 23	10 34	8 86	7 68	**80**
	81	18 11	14 85	12 39	10 50	9 02	7 83	81
	82	18 24	15 00	12 54	10 65	9 16	7 97	82
	83	18 38	15 15	12 69	10 80	9 31	8 12	83
	84	18 52	15 29	12 84	10 95	9 46	8 26	84
	85	18 66	15 44	13 00	11 10	9 61	8 41	**85**
	86	18 78	15 57	13 13	11 25	9 75	8 55	86
	87	18 88	15 68	13 25	11 35	9 86	8 66	87
	88	18 94	15 75	13 31	11 42	9 92	8 72	88
	89	19 01	15 82	13 39	11 50	10 00	8 80	89
	90	19 11	15 93	13 51	11 62	10 13	8 92	**90**

E. G. The present worth of the Next Presentation to a Living, of the Youngest Life, viz. 25, to be nominated at the Death of the Party now in Possession, aged 72, at **5** ℔ cent. is 10 93, or nearly 11 years' purchase; and the present worth of each £100 of net income is £1093.

If calculated at **6** ℔ cent., is 9 07, or rather more than 9 years' purchase; and the present worth of each £100 of net income is £907.

Present Worth of Property for Terms of Years certain, whether Lease, Estate, or Annuity.

☞ The Answers show the value of each £ 100 of net income, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his capital, provided he can re-invest at the same rate of interest; but if he pay, under the 10 ℔ cent. column, £ 736 for £100 a year for 14 years, and the average current value of money should only be 3 ℔ cent., he would only realize about 7½ ℔ cent. on his money. See Table XV.

Years' Purchase, or Pounds for each £ 100 a Year.

Years.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	9 ℔ Cent.	10 ℔ Cent.	Years.
	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
½	49	48	48	48	47	47	47	46	½
1	97	96	95	94	93	92	92	91	1
1½	1 44	1 43	1 41	1 39	1 38	1 36	1 35	1 33	1½
2	1 91	1 88	1 86	1 83	1 81	1 78	1 76	1 73	2
2½	2 37	2 33	2 29	2 26	2 22	2 19	2 15	2 12	2½
3	2 83	2 77	2 72	2 67	2 62	2 58	2 53	2 48	3
3½	3 27	3 20	3 14	3 07	3 01	2 95	2 89	2 83	3½
4	3 72	3 63	3 54	3 46	3 39	3 31	3 24	3 17	4
4½	4 15	4 04	3 94	3 84	3 75	3 66	3 57	3 49	4½
5	4 58	4 45	4 33	4 21	4 10	3 99	3 89	3 79	**5**
5½	5 00	4 85	4 71	4 57	4 44	4 31	4 19	4 08	5½
6	5 42	5 24	5 07	4 92	4 76	4 62	4 48	4 35	6
6½	5 82	5 62	5 43	5 25	5 08	4 92	4 76	4 62	6½
7	6 23	6 00	5 78	5 58	5 39	5 20	5 03	4 87	7
7½	6 63	6 37	6 13	5 90	5 68	5 48	5 29	5 11	7½
8	7 02	6 73	6 46	6 21	5 97	5 74	5 53	5 33	8
8½	7 40	7 09	6 79	6 51	6 25	6 00	5 77	5 55	8½
9	7 78	7 43	7 11	6 80	6 51	6 24	5 99	5 76	9
9½	8 16	7 77	7 42	7 09	6 77	6 48	6 21	5 95	9½
10	8 53	8 11	7 72	7 36	7 02	6 71	6 42	6 14	**10**
10½	8 89	8 44	8 02	7 63	7 26	6 93	6 61	6 32	10½
11	9 25	8 76	8 30	7 88	7 50	7 14	6 80	6 49	11
11½	9 60	9 07	8 59	8 14	7 72	7 34	6 98	6 66	11½
12	9 95	9 38	8 86	8 38	7 94	7 53	7 16	6 81	12
12½	10 29	9 69	9 13	8 62	8 15	7 72	7 33	6 96	12½
13	10 63	9 98	9 39	8 85	8 36	7 90	7 48	7 10	13
13½	10 97	10 28	9 65	9 08	8 55	8 08	7 64	7 24	13½
14	11 29	10 56	9 90	9 29	8 74	8 24	7 78	7 36	14
14½	11 62	10 84	10 14	9 50	8 93	8 40	7 92	7 49	14½
15	11 94	11 12	10 38	9 71	9 11	8 56	8 06	7 60	**15**

E. G. The present worth of a Lease, Estate, or Annuity, for 14 years, at **5** ℔ cent. is 9 90, or nearly 10 years' purchase of the net income; and the present worth of £ 100 of net income is £ 990.

If calculated at **7** ℔ cent., the present worth is 8 74, or 8¾ years' purchase; and the present worth of each £ 100 of net income is £ 874.

Present Worth of Property for Terms of Years certain, whether Lease, Estate, or Annuity.

☞ The Answers show the value of each £100 of net income, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his capital, provided he can re-invest at the same rate of interest; but if he pay, under the 8 ℔ cent. column, £1000 for £100 a year for 21 years, and the average current value of money should only be 3 ℔ cent., he would only realize about 6½ ℔ cent. on his money. See Table XV.

Terms.	Years' Purchase, or Pounds for each £100 a Year.								Terms.
	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	9 ℔ Cent.	10 ℔ Cent.	
	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	Years Purch.	
15½	12 25	11 39	10 62	9 97	9 29	8 71	[illegible]	[illegible]	15½
16	12 56	11 65	10 84	10 18	9 41	8 85	[illegible]	7 82	16
16½	12 86	11 91	11 06	10 29	9 61	8 99	8 43	7 92	16½
17	13 16	12 16	11 27	10 48	9 76	9 12	8 54	8 02	17
17½	13 46	12 41	11 48	10 65	9 91	9 25	8 65	8 11	17½
18	13 75	12 66	11 69	10 83	10 06	9 37	8 75	8 20	18
18½	14 01	12 90	11 89	10 99	10 20	9 49	8 85	8 28	18½
19	14 32	13 13	12 09	11 16	10 33	9 60	8 95	8 36	19
19½	14 59	13 36	12 27	11 31	10 47	9 71	9 04	8 44	19½
20	14 85	13 59	12 46	11 47	10 59	9 82	9 13	8 51	**20**
20½	15 15	13 81	12 64	11 62	10 71	9 92	9 21	8 58	20½
21	15 41	14 03	12 82	11 76	10 83	10 01	9 29	8 65	21
22	15 93	14 45	13 16	12 04	11 06	10 20	9 44	8 77	22
23	16 44	14 85	13 49	12 30	11 27	10 37	9 58	8 88	23
24	16 93	15 24	13 80	12 55	11 47	10 53	9 70	8 98	24
25	17 41	15 62	14 09	12 78	11 65	10 67	9 82	9 08	**25**
26	17 87	15 98	14 37	13 00	11 82	10 81	9 93	9 16	26
27	18 33	16 33	14 64	13 21	11 98	10 93	10 02	9 21	27
28	18 76	16 66	14 90	13 40	12 14	11 05	10 11	9 30	28
29	19 19	16 98	15 14	13 59	12 28	11 16	10 20	9 37	29
30	19 60	17 29	15 37	13 76	12 41	11 26	10 27	9 43	**30**
31	20 00	17 59	15 59	13 93	12 53	11 35	10 34	9 48	31
32	20 39	17 87	15 80	14 08	12 65	11 43	10 41	9 53	32
33	20 76	18 15	16 00	14 23	12 75	11 51	10 46	9 57	33
34	21 13	18 41	16 19	14 37	12 85	11 59	10 52	9 61	34
35	21 49	18 66	16 37	14 50	12 95	11 65	10 56	9 61	**35**
36	21 83	18 91	16 55	14 62	13 03	11 72	10 61	9 67	36
37	22 17	19 14	16 71	14 73	13 12	11 78	10 65	9 70	37
38	22 49	19 37	16 87	14 84	13 19	11 83	10 69	9 73	38
39	22 81	19 58	17 02	14 95	13 26	11 88	10 73	9 75	39

E.G. The present worth of a Lease, Estate, or Annuity, for 21 years, at 4 ℔ cent. is 14.03, or 14 years' purchase of the net income; and the present worth of £100 of net income is £1403.

If calculated at 8 ℔ cent., the present worth is 10.01, or 10 years' purchase; and the present worth of each £100 of net income is £1001.

Present Worth of Property for Terms of Years certain, whether Lease, Estate, or Annuity.

☞ The Answers show the value of each £100 of net income, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his Capital, provided he can reinvest at the same rate of interest; but if he pay, under the 6 ℘ cent. column, £1581 for £100 a year for 51 years, and the average current value of money should only be 3 ℘ cent., he would only realize about 4½ ℘ cent. on his money. See Table XV.

Years.	Years' Purchase, or Pounds for each £100 a Year.								Years.
	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	
	Years' Purch.	Years' Purch.	Years' Purch.	Years' Purch.	Years' Purch.	Years' Purch.	Years' Purch.	Years' Purch.	
40	23.11	19.79	17.16	15.04	13.33	11.92	10.76	9.78	40
41	23.41	19.99	17.29	15.14	13.39	11.97	10.79	9.80	41
42	23.70	20.19	17.42	15.22	13.45	12.01	10.81	9.82	42
43	23.98	20.37	17.54	15.30	13.50	12.05	10.84	9.83	43
44	24.25	20.55	17.66	15.38	13.56	12.09	10.86	9.85	44
45	24.52	20.72	17.77	15.45	13.60	12.11	10.88	9.86	45
46	24.78	20.88	17.88	15.52	13.65	12.14	10.90	9.87	46
47	25.02	21.04	17.98	15.59	13.69	12.16	10.92	9.88	47
48	25.27	21.20	18.08	15.65	13.73	12.19	10.93	9.89	48
49	25.50	21.34	18.17	15.71	13.76	12.21	10.95	9.90	49
50	25.73	21.48	18.25	15.76	13.80	12.23	10.96	9.91	50
51	25.95	21.62	18.34	15.81	13.83	12.25	10.97	9.92	51
52	26.16	21.75	18.42	15.86	13.86	12.27	10.98	9.92	52
53	26.37	21.87	18.49	15.90	13.89	12.29	10.99	9.93	53
54	26.58	21.99	18.56	15.95	13.91	12.30	11.00	9.94	54
55	26.77	22.11	18.63	15.99	13.94	12.31	11.01	9.94	55
56	26.96	22.22	18.70	16.03	13.96	12.33	11.02	9.95	56
57	27.15	22.33	18.76	16.06	13.99	12.34	11.03	9.95	57
58	27.33	22.43	18.82	16.10	14.00	12.35	11.03	9.96	58
59	27.50	22.53	18.87	16.13	14.02	12.36	11.04	9.96	59
60	27.67	22.62	18.93	16.16	14.04	12.37	11.05	9.97	60
61	27.84	22.71	18.96	16.19	14.05	12.38	11.05	9.97	61
62	28.00	22.80	19.03	16.22	14.07	12.39	11.05	9.97	62
63	28.15	22.89	19.07	16.24	14.08	12.40	11.06	9.97	63
64	28.30	22.97	19.10	16.26	14.10	12.41	11.06	9.98	64
65	28.45	23.04	19.16	16.29	14.11	12.42	11.07	9.98	65
66	28.59	23.12	19.20	16.31	14.12	12.42	11.07	9.98	66
67	28.73	23.19	19.24	16.33	14.13	12.43	11.07	9.98	67
68	28.87	23.26	19.27	16.35	14.14	12.43	11.08	9.98	68
69	28.99	23.33	19.31	16.37	14.15	12.44	11.08	9.99	69

N.B. The present worth of a Lease, Estate, or Annuity, for 51 years, at 4 ℘ cent. is 21.62, or 22 years' purchase of the net income; and the present worth of £100 of net income is £2162.

If calculated at 6 ℘ cent., the present worth is 15.81, or nearly 16 years' purchase; and the present worth of each £100 of net income is £1581.

TABLE XIV.—*continued.*

PRESENT WORTH of PROPERTY for Terms of Years CERTAIN, whether LEASE, ESTATE, or ANNUITY.

☞ The Answers show the value of each £100 of NET INCOME, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided he can re-invest at the same rate of interest; but if he pay, under the 6 ℘ cent. column, £1650 for £100 a year for 79 years, and the average current value of money should only be 3 ℘ cent., he would only realize about 5¾ ℘ cent. on his money. See TABLE XV.

YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR.

Years.	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	Years.
	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
70	29 12	23 39	19 34	16 38	14 16	12 44	11 08	9 99	**70**
71	29 24	23 45	19 37	16 40	14 17	12 45	11 08	9 99	71
72	29 36	23 51	19 40	16 41	14 17	12 45	11 09	9 99	72
73	29 48	23 57	19 43	16 43	14 18	12 45	11 09	9 99	73
74	29 59	23 63	19 46	16 44	14 19	12 46	11 09	9 99	74
75	29 70	23 68	19 48	16 45	14 19	12 46	11 09	9 99	**75**
76	29 81	23 73	19 51	16 47	14 20	12 46	11 09	9 99	76
77	29 91	23 78	19 53	16 48	14 21	12 46	11 09	9 99	77
78	30 01	23 82	19 55	16 49	14 21	12 47	11 10	9 99	78
79	30 10	23 87	19 57	16 50	14 22	12 47	11 10	9 99	79
80	30 20	23 91	19 59	16 51	14 22	12 47	11 10	9 99	**80**
81	30 29	23 96	19 61	16 52	14 22	12 47	11 10	9 99	81
82	30 38	24 00	19 63	16 52	14 23	12 48	11 10	9 99	82
83	30 46	24 03	19 65	16 53	14 23	12 48	11 10	9 99	83
84	30 55	24 07	19 67	16 54	14 24	12 48	11 10	9 99	84
85	30 63	24 11	19 68	16 55	14 24	12 48	11 10	9 99	**85**
86	30 71	24 14	19 70	16 55	14 24	12 48	11 10	9 99	86
87	30 78	24 17	19 71	16 56	14 24	12 48	11 10	9 99	87
88	30 86	24 21	19 72	16 57	14 25	12 48	11 10	9 99	88
89	30 93	24 24	19 74	16 57	14 25	12 48	11 10	9 99	89
90	31 00	24 27	19 75	16 58	14 25	12 49	11 10	9 99	**90**
91	31 07	24 29	19 76	16 58	14 25	12 49	11 10	9 99	91
92	31 13	24 32	19 77	16 59	14 26	12 49	11 10	9 99	92
93	31 20	24 35	19 78	16 59	14 26	12 49	11 10	9 99	93
94	31 26	24 37	19 79	16 59	14 26	12 49	11 10	9 99	94
95	31 32	24 40	19 80	16 60	14 26	12 49	11 10	9 99	**95**
96	31 38	24 42	19 81	16 60	14 26	12 49	11 10	9 99	96
97	31 44	24 44	19 82	16 61	14 26	12 49	11 10	9 99	97
98	31 49	24 46	19 83	16 61	14 26	12 49	11 10	9 99	98
99	31 54	24 48	19 84	16 61	14 27	12 49	11 10	9 99	99
100	31 60	24 50	19 85	16 62	14 27	12 49	11 10	9 99	**100**
Perpetuity.	33 33	25 00	20 00	16 66	14 28	12 50	11 11	10 00	Perpetuity.

E.G. The PRESENT WORTH of a LEASE, ESTATE, or ANNUITY, for 76 years, at **5** ℘ cent. is 19 51, or 19½ years' purchase of the NET INCOME; and the present worth of £100 of NET INCOME is £1951.

If calculated at **6** ℘ cent., the present worth is 16 47, or 16½ years' purchase; and the present worth of each £100 of NET INCOME is £1647.

TABLE XV.

Present Worth of a Lease, Estate, or Annuity, of £100 per annum, for a given Number of Years certain, supposing the purchaser thereof to take out of the Rent or Annuity £5 ℔ cent., £6 ℔ cent., or £7 ℔ cent. per annum, as an available interest on his purchase-money or capital advanced, while he is only enabled to re-invest the Surplus of the Rent or Annuity beyond the available interest, so as to make 3 ℔ cent., 3½ ℔ cent., 4 ℔ cent., or 5 ℔ cent. thereof, in order to replace the purchase-money or capital.

☞ The Answers show the value of each £100 of net income in Pounds, as well as the number of years' purchase.

	Interest to be 5 ℔ Cent.			Interest to be 6 ℔ Cent.				Interest to be 7 ℔ Cent.			
	The Re-investments to replace Capital to be made at the rate of			The Re-investments to replace Capital to be made at the rate of				The Re-investments to replace Capital to be made at the rate of			
Years.	3 ℔ Cent.	3½ ℔ Cent.	4 ℔ Cent.	3 ℔ Cent.	3½ ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	3 ℔ Cent.	3½ ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.
	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.
1	95	95	95	94	94	94	94	93	93	93	93
2	1 84	1 85	1 85	1 81	1 81	1 82	1 82	1 78	1 78	1 78	1 79
3	2 68	2 69	2 70	2 61	2 62	2 63	2 65	2 54	2 55	2 56	2 58
4	3 46	3 48	3 50	3 34	3 36	3 38	3 42	3 23	3 25	3 27	3 31
5	4 19	4 23	4 26	4 02	4 06	4 09	4 15	3 87	3 90	3 93	3 98
6	4 89	4 93	4 98	4 66	4 70	4 74	4 83	4 45	4 49	4 53	4 61
7	5 54	5 60	5 66	5 24	5 30	5 36	5 47	4 99	5 03	5 08	5 18
8	6 15	6 22	6 31	5 72	5 86	5 93	6 07	5 48	5 54	5 60	5 72
9	6 74	6 83	6 92	6 31	6 39	6 47	6 63	5 94	5 87	6 08	6 22
10	7 29	7 39	7 50	6 79	6 88	6 98	7 17	6 36	6 41	6 52	6 69
11	7 81	7 93	8 05	7 24	7 35	7 45	7 67	6 75	6 84	6 94	7 12
12	8 30	8 44	8 58	7 66	7 78	7 90	8 14	7 12	7 22	7 32	7 53
13	8 77	8 92	9 08	8 06	8 19	8 32	8 58	7 46	7 57	7 68	7 91
14	9 21	9 38	9 55	8 44	8 58	8 72	9 01	7 78	7 90	8 02	8 26
15	9 63	9 82	10 00	8 79	8 94	9 09	9 40	8 08	8 21	8 34	8 59
16	10 04	10 24	10 43	9 12	9 28	9 45	9 78	8 36	8 50	8 63	8 91
17	10 42	10 63	10 85	9 44	9 61	9 78	10 13	8 62	8 77	8 91	9 20
18	10 79	11 01	11 24	9 73	9 92	10 10	10 47	8 87	9 00	9 17	9 47
19	11 13	11 37	11 61	10 02	10 21	10 40	10 78	9 10	9 26	9 42	9 73
20	11 46	11 71	11 96	10 28	10 49	10 68	11 08	9 32	9 49	9 65	9 97
21	11 78	12 04	12 30	10 54	10 75	10 95	11 36	9 52	9 70	9 87	10 20
22	12 08	12 35	12 62	10 78	11 00	11 21	11 63	9 73	9 91	10 08	10 42
23	12 37	12 65	12 93	11 01	11 23	11 45	11 88	9 92	10 10	10 28	10 62
24	12 65	12 94	13 23	11 23	11 46	11 68	12 12	10 09	10 28	10 46	10 81
25	12 91	13 21	13 51	11 44	11 67	11 90	12 35	10 26	10 45	10 64	10 99
26	13 17	13 47	13 78	11 64	11 87	12 11	12 57	10 42	10 61	10 80	11 16
27	13 41	13 73	14 04	11 82	12 07	12 31	12 77	10 57	10 77	10 96	11 32
28	13 64	13 96	14 28	12 00	12 25	12 53	12 97	10 72	10 92	11 11	11 48
29	13 87	14 19	14 52	12 18	12 43	12 68	13 15	10 85	11 05	11 25	11 62
30	14 08	14 41	14 74	12 34	12 60	12 85	13 32	10 99	11 19	11 38	11 76

⁎ The above has been arranged from an original Table by Peter Hardy, Esq.

PRESENT WORTH of a LEASE, ESTATE, or ANNUITY, of £100 per annum, for a given Number of Years certain, supposing the purchaser thereof to take out of the Rent or Annuity £5 ℘ cent., £6 ℘ cent., or £7 ℘ cent. per annum, as an available interest on his PURCHASE-MONEY or CAPITAL advanced, while he is only enabled to re-invest the surplus of the Rent or Annuity beyond the available interest, so as to make 3 ℘ cent., 3½ ℘ cent., 4 ℘ cent., or 5 ℘ cent. thereof, in order to replace the purchase-money or capital.

☞ The Answers show the value of each £100 of NET INCOME in Pounds, as well as the number of years' purchase.

	INTEREST TO BE 5 ℘ CENT.			INTEREST TO BE 6 ℘ CENT.				INTEREST TO BE 7 ℘ CENT.			
	The Re-investments to replace Capital to be made at the rate of			The Re-investments to replace Capital to be made at the rate of				The Re-investments to replace Capital to be made at the rate of			
Years.	3 ℘ Cent.	3½ ℘ Cent.	4 ℘ Cent.	3 ℘ Cent.	3½ ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	3 ℘ Cent.	3½ ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.
	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.	Pounds, or Years & Parts.
31	14 28	14 62	14 96	12 50	12 76	13 01	13 49	11 11	11 31	11 51	11 88
32	14 48	14 83	15 16	12 65	12 91	13 17	13 64	11 23	11 44	11 63	12 01
33	14 67	15 02	15 36	12 79	13 06	13 31	13 79	11 34	11 55	11 75	12 12
34	14 85	15 21	15 55	12 93	13 20	13 45	13 93	11 45	11 66	11 86	12 23
35	15 03	15 38	15 73	13 06	13 33	13 59	14 07	11 55	11 76	11 96	12 33
36	15 20	15 55	15 90	13 19	13 46	13 72	14 20	11 65	11 86	12 06	12 43
37	15 36	15 72	16 07	13 31	13 58	13 84	14 32	11 75	11 96	12 16	12 52
38	15 51	15 88	16 22	13 43	13 70	13 96	14 43	11 84	12 05	12 25	12 61
39	15 66	16 03	16 38	13 54	13 81	14 07	14 54	11 93	12 14	12 34	12 69
40	15 81	16 17	16 52	13 65	13 92	14 18	14 65	12 01	12 22	12 42	12 78
41	15 94	16 31	16 66	13 75	14 02	14 28	14 74	12 09	12 30	12 50	12 85
42	16 08	16 45	16 79	13 85	14 12	14 38	14 84	12 17	12 38	12 57	12 92
43	16 21	16 58	16 92	13 95	14 22	14 47	14 93	12 24	12 45	12 64	12 99
44	16 33	16 70	17 04	14 04	14 31	14 56	15 01	12 31	12 52	12 71	13 05
45	16 45	16 82	17 16	14 13	14 40	14 65	15 09	12 38	12 59	12 78	13 11
46	16 57	16 93	17 28	14 21	14 48	14 73	15 17	12 44	12 62	12 84	13 17
47	16 68	17 04	17 38	14 29	14 56	14 81	15 24	12 51	12 71	12 90	13 25
48	16 78	17 15	17 49	14 37	14 64	14 88	15 31	12 57	12 77	12 96	13 28
49	16 89	17 25	17 59	14 45	14 71	14 95	15 37	12 62	12 80	13 01	13 33
50	16 99	17 31	17 68	14 52	14 75	15 02	15 44	12 68	12 88	13 06	13 37
60	17 81	18 15	18 45	15 12	15 36	15 61	15 91	13 13	13 32	13 48	13 73
70	18 40	18 70	18 96	15 53	15 76	15 94	16 21	13 45	13 61	13 75	13 93
80	18 83	19 09	19 30	15 81	16 03	16 19	16 38	13 68	13 81	13 92	14 08
90	19 14	19 36	19 53	16 05	16 22	16 34	16 49	13 84	13 95	14 04	14 16
99	19 34	19 53	19 67	16 21	16 34	16 44	16 55	13 95	14 04	14 11	14 20
100	19 36	19 55	19 68	16 22	16 35	16 44	16 56	13 96	14 05	14 12	14 21

E. G. The PRESENT WORTH of a LEASE or ANNUITY for 21 years, if the purchaser is to make 6 ℘ cent. on the purchase-money, and re-invests the surplus at 3 ℘ cent. to replace capital, is 10 54, or a very little more than 10½ years' purchase of the NET INCOME; and the present worth of each £100 of NET INCOME is £1054.

If calculated to make 7 ℘ cent. on the purchase-money, and re-invest the surplus at 3½ ℘ cent., the present worth is 9 70, or nearly 9¾ years' purchase of the NET INCOME; and the present worth of each £100 of NET INCOME is £970.

PRESENT WORTH of the **REVERSION** to £100 payable at the end of any number of years.

☞ By this Table will be seen what present sum of money will, by Compound Interest, amount to £100 at the end of any required number of years.

*** See POUND DECIMAL TABLE, page 79.

Years.	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
1	97·087	96·154	95·238	94·339	93·458	92 592	91·743	90·909	1
2	94·259	92·455	90·703	88·999	87·344	85 734	84·168	82·644	2
3	91·514	88·899	86·384	83·962	81·630	79 383	77·218	75·131	3
4	88·849	85·480	82·270	79·209	76·289	73 503	70·842	68·301	4
5	86·261	82·193	78·352	74·726	71·298	68 058	64·993	62·092	5
6	83·748	79·031	74·621	70·496	66·634	63 017	59·627	56·447	6
7	81·309	75·992	71·068	66·506	62·275	58 349	54·703	51·316	7
8	78·941	73·069	67·684	62·741	58·201	54 027	50·186	46·651	8
9	76·641	70·258	64·461	59·190	54·393	50 025	46·043	42·410	9
10	74·409	67·556	61·391	55·839	50·835	46·319	42·241	38·554	**10**
11	72·242	64·958	58·468	52·679	47·509	42·888	38·753	35·049	11
12	70·138	62·460	55·684	49·697	44·401	39·711	35·553	31·863	12
13	68·095	60·057	53·032	46·884	41·496	36·770	32·618	28·966	13
14	66·112	57·747	50·507	44·230	38·782	34·046	29·924	26·333	14
15	64·186	55·526	48·102	41·726	36·244	31·524	27·454	23·939	15
16	62·316	53·391	45·811	39·364	33·873	29·189	25·187	21·763	16
17	60·501	51·337	43·629	37·136	31·657	27·027	23·107	19·784	17
18	58·739	49·363	41·552	35·034	29·586	25·025	21·199	17·986	18
19	57·028	47·464	39·573	33·051	27·651	23·171	19·449	16·351	19
20	55·367	45·638	37·689	31·180	25·842	21·455	17·843	14·864	**20**
21	53·755	43·883	35·894	29·415	24·151	19·865	16·370	13·513	21
22	52·189	42·195	34·185	27·750	22·571	18·394	15·018	12·284	22
23	50·669	40·572	32·557	26·180	21·094	17·031	13·778	11·168	23
24	49·193	39·012	31·007	24·698	19·714	15·770	12·640	10·152	24
25	47·760	37·511	29·530	23·300	18·425	14·602	11·597	9·229	25
26	46·369	36·069	28·124	21·981	17·219	13·520	10·639	8·390	26
27	45·019	34·681	26·785	20·737	16·093	12·518	9·761	7·628	27
28	43·707	33·348	25·509	19·563	15·040	11·591	8·955	6·934	28
29	42·434	32·065	24·294	18·455	14·056	10·733	8·215	6·304	29
30	41·198	30·832	23·138	17·411	13·137	9·938	7·537	5·731	**30**
31	39·999	29·646	22·036	16·425	12·277	9·201	6·915	5·210	31
32	38·834	28·506	20·986	15·496	11·474	8·520	6·344	4·736	32

E.G. The PRESENT WORTH of £100 payable at the end of 21 years—at **3** ℘ cent. is £53·755, or £53. 15*s.* 1*d.*; at **5** ℘ cent. £35·894, or £35. 17*s.* 10*d.*; at **8** ℘ cent. £19·865, or £19. 17*s.* 4*d.*; and at **10** ℘ cent. only £13·513, or £13. 10*s.* 3*d.*

PRESENT WORTH of the REVERSION to £100 payable at the end of any number of years.

☞ By this Table will be seen what present sum of money will, by Compound Interest, amount to £100 at the end of any required number of years.

*** See POUND DECIMAL TABLE, page 79.

Years.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	9 ℔ Cent.	10 ℔ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
33	37·702	27·409	19·987	14·618	10·723	7·889	5·820	4·305	33
34	36·604	26·355	19·035	13·791	10·022	7·304	5·339	3·914	34
35	35·538	25·341	18·129	13·010	9·366	6·763	4·898	3·558	35
36	34·503	24·367	17·266	12·274	8·753	6·262	4·494	3·235	36
37	33·498	23·429	16·443	11·579	8·181	5·798	4·123	2·941	37
38	32·522	22·528	15·660	10·924	7·645	5·369	3·782	2·673	38
39	31·575	21·662	14·915	10·305	7·145	4·971	3·470	2·430	39
40	30·655	20·829	14·204	9·722	6·678	4·603	3·184	2·209	**40**
41	29·763	20·028	13·528	9·172	6·241	4·262	2·921	2·008	41
42	28·896	19·257	12·884	8·653	5·833	3·946	2·680	1·826	42
43	28·054	18·517	12·270	8·163	5·451	3·654	2·458	1·660	43
44	27·237	17·804	11·686	7·701	5·094	3·383	2·255	1·509	44
45	26·444	17·120	11·129	7·265	4·761	3·133	2·069	1·372	45
46	25·673	16·461	10·599	6·854	4·450	2·901	1·898	1·247	46
47	24·926	15·828	10·095	6·466	4·159	2·686	1·741	1·134	47
48	24·200	15·219	9·614	6·100	3·886	2·487	1·598	1·031	48
49	23·495	14·634	9·156	5·754	3·632	2·302	1·466	0·937	49
50	22·811	14·071	8·720	5·429	3·395	2·132	1·345	0·852	**50**
51	22·146	13·530	8·305	5·121	3·172	1·974	1·234	0·774	51
52	21·501	13·009	7·909	4·831	2·965	1·828	1·132	0·704	52
53	20·875	12·509	7·533	4·558	2·771	1·692	1·038	0·640	53
54	20·267	12·028	7·174	4·300	2·590	1·567	0·953	0·582	54
55	19·677	11·565	6·832	4·057	2·420	1·451	0·874	0·529	55
56	19·103	11·121	6·507	3·827	2·262	1·343	0·802	0·481	56
57	18·547	10·693	6·197	3·610	2·114	1·244	0·735	0·437	57
58	18·007	10·282	5·902	3·406	1·976	1·152	0·675	0·397	58
59	17·482	9·886	5·621	3·213	1·846	1·066	0·619	0·361	59
60	16·973	9·506	5·353	3·031	1·726	0·987	0·568	0·328	**60**
61	16·479	9·140	5·098	2·860	1·613	0·914	0·521	0·298	61
62	15·999	8·789	4·856	2·698	1·507	0·846	0·478	0·271	62
63	15·533	8·451	4·624	2·545	1·409	0·784	0·438	0·247	63
64	15·080	8·126	4·404	2·401	1·316	0·726	0·402	0·224	64
65	14·641	7·813	4·194	2·265	1·230	0·672	0·369	0·204	65
66	14·215	7·513	3·995	2·137	1·150	0·622	0·339	0·185	66
67	13·801	7·224	3·804	2·016	1·074	0·576	0·311	0·168	67
68	13·399	6·946	3·623	1·902	1·004	0·533	0·285	0·153	68
69	13·008	6·679	3·451	1·794	0·938	0·494	0·261	0·139	69

E. G. The PRESENT WORTH of £100 payable at the end of 50 years—at **5** ℔ cent. is £8·720, or £8. 14*s.* 5*d.*: at **7** ℔ cent. is £3·395, or £3. 7*s.* 11*d.*: at **8** ℔ cent. £2·132, or £2. 2*s.* 8*d.*; and at **9** ℔ cent. £1·345, or £1. 6*s.* 11*d.*

PRESENT WORTH of the **REVERSION** at **£100** payable at the end of any number of years.

☞ By this Table will be seen what present sum of money will, by Compound Interest, amount to £100 at the end of any required number of years.

*** See POUND DECIMAL TABLE, page 79.

Years.	3 ꝑ Cent.	4 ꝑ Cent.	5 ꝑ Cent.	6 ꝑ Cent.	7 ꝑ Cent.	8 ꝑ Cent.	9 ꝑ Cent.	10 ꝑ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
70	12·630	6·422	3·286	1·693	0·877	0·457	0·240	0·126	**70**
71	12·262	6·175	3·130	1·597	0·820	0·423	0·220	0·115	71
72	11·905	5·937	2·981	1·506	0·766	0·392	0·202	0·104	72
73	11·558	5·709	2·839	1·421	0·716	0·363	0·185	0·095	73
74	11·221	5·489	2·704	1·341	0·669	0·336	0·170	0·086	74
75	10·894	5·278	2·575	1·265	0·625	0·311	0·156	0·078	75
76	10·577	5·075	2·452	1·193	0·584	0·288	0·143	0·071	76
77	10·269	4·880	2·336	1·126	0·546	0·267	0·131	0·065	77
78	9·970	4·692	2·224	1·062	0·510	0·247	0·120	0·059	78
79	9·679	4·512	2·118	1·002	0·477	0·229	0·110	0·054	79
80	9·398	4·338	2·017	0·945	0·446	0·212	0·101	0·049	**80**
81	9·124	4·171	1·921	0·892	0·417	0·196	0·093	0·044	81
82	8·858	4·011	1·830	0·841	0·389	0·181	0·085	0·040	82
83	8·600	3·857	1·743	0·793	0·364	0·168	0·078	0·036	83
84	8·350	3·708	1·660	0·748	0·340	0·156	0·072	0·033	84
85	8·106	3·566	1·581	0·706	0·318	0·144	0·066	0·030	85
86	7·870	3·429	1·505	0·666	0·297	0·133	0·060	0·027	86
87	7·641	3·297	1·434	0·628	0·278	0·123	0·055	0·025	87
88	7·418	3·170	1·365	0·593	0·259	0·114	0·051	0·023	88
89	7·202	3·048	1·300	0·559	0·242	0·106	0·046	0·021	89
90	6·993	2·931	1·238	0·528	0·227	0·098	0·043	0·019	**90**
91	6·789	2·818	1·180	0·498	0·212	0·091	0·039	0·017	91
92	6·591	2·710	1·123	0·470	0·198	0·084	0·036	0·015	92
93	6·399	2·605	1·070	0·443	0·185	0·078	0·033	0·014	93
94	6·213	2·505	1·019	0·418	0·173	0·072	0·030	0·013	94
95	6·032	2·409	0·970	0·394	0·161	0·067	0·028	0·011	95
96	5·856	2·316	0·924	0·372	0·151	0·062	0·025	0·010	96
97	5·686	2·227	0·880	0·351	0·141	0·057	0·023	0·009	97
98	5·520	2·141	0·838	0·331	0·132	0·053	0·021	0·009	98
99	5·359	2·059	0·798	0·312	0·123	0·049	0·020	0·008	99
100	5·203	1·980	0·760	0·295	0·115	0·045	0·018	0·007	**100**

☞ By changing the decimal point two places to the left, and adding one 0, or two if necessary, the PRESENT WORTH to the REVERSION to £1 may be ascertained.

E. G. The PRESENT WORTH of £100 payable at the end of 71 years—at **3** ꝑ cent. is £12·262, or £12. 5*s*. 3*d*.: at **5** ꝑ cent. is £3·130, or £3. 2*s*. 7*d*.: at **8** ꝑ cent. £0·423, or £0. 8*s*. 5*d*.; and at **10** ꝑ cent. only £0·115, or £0. 2*s*. 4*d*.

Present Worth of the **Reversion** of **£100**, payable at the **Death** of a Party of a given age, according to the **CARLISLE** Table of Mortality.

N. B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided the Party exists the average duration of Life.

Age.	3 ₰ Cent.	3½ ₰ Cent.	4 ₰ Cent.	5 ₰ Cent.	6 ₰ Cent.	7 ₰ Cent.	8 ₰ Cent.	Age.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
0	46·641	43·621	41·224	37·700	35·251	33·421	32·015	0
1	38·587	35·171	32·483	28·595	25·974	24·079	22·674	1
2	34·463	30·826	27·976	23·891	21·179	19·258	17·867	2
3	31·021	27·178	24·173	19·886	17·065	15·097	13·696	3
4	29·267	25·294	22·187	17·757	14·857	12·847	11·430	4
5	28·079	23·997	20·800	16·238	13·255	11·198	9·748	5
6	27·633	23·474	20·211	15·548	12·491	10·387	8·904	6
7	27·572	23·355	20·038	15·286	12·163	10·007	8·489	7
8	27·764	23·499	20·137	15·305	12·117	9·916	8·363	8
9	28·125	23·820	20·419	15·514	12·264	10·021	8·430	9
10	28·606	24·269	20·833	15·862	12·558	10·263	8·637	10
11	29·145	24·781	21·313	16·281	12·921	10·577	8·919	11
12	29·681	25·288	21·789	16·695	13·277	10·891	9·193	12
13	30·222	25·802	22·272	17·114	13·640	11·211	9·474	13
14	30·771	26·323	22·762	17·543	14·013	11·538	9·763	14
15	31·315	26·840	23·249	17·967	14·381	11·859	10·045	15
16	31·833	27·330	23·706	18·362	14·715	12·147	10·289	16
17	32·334	27·802	24·150	18·733	15·026	12·408	10·511	17
18	32·841	28·279	24·590	19·110	15·343	12·677	10·733	18
19	33·362	28·773	25·052	19·505	15·677	12·958	10·970	19
20	33·901	29·285	25·532	19·919	16·028	13·259	11·222	20
21	34·455	29·814	26·031	20·352	16·402	13·579	11·496	21
22	35·037	30·374	26·562	20·819	16·809	13·933	11·807	22
23	35·637	30·954	27·115	21·310	17·240	14·312	12·141	23
24	36·252	31·555	27·690	21·824	17·692	14·711	12·496	24
25	36·808	32·179	28·289	22·367	18·174	15·136	12·874	25
26	37·548	32·813	28·901	22·919	18·672	15·581	13·267	26
27	38·218	33·471	29·538	23·500	19·198	16·052	13·689	27
28	38·890	34·132	30·176	24·086	19·725	16·529	14·119	28
29	39·531	34·759	30·781	24·633	20·211	16·962	14·504	29

E. G. The Reversion to £100 payable at the death of 20—at **4** ₰ cent. is worth £25·532, or £25. 10*s.* 8*d.*: at **5** ₰ cent. £19·919, or £19. 18*s.* 4*d.*; and at **7** ₰ cent. £13·259, or £13. 5*s.* 2*d.*

PRESENT WORTH of the REVERSION of £100, payable at the DEATH of a Party of a given age, according to the **CARLISLE** Table of Mortality.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided the Party exists the average duration of Life.

Age.	3 ℔ Cent.	$3\frac{1}{2}$ ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	Age.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
30	40·129	35·340	31·338	25·129	20·642	17·335	14·830	**30**
31	40·734	35·929	31·903	25·633	21·083	17·714	15·155	31
32	41·357	36·539	32·491	26·162	21·547	18·120	15·504	32
33	42·010	37·182	33·113	26·729	22·051	18·564	15·889	33
34	42·694	37·858	33·771	27·333	22·594	19·049	16·319	34
35	43·399	38·560	34·457	27·967	23·172	19·565	16·778	**35**
36	44·117	39·287	35·170	28·633	23·783	20·115	17·274	36
37	44·870	40·029	35·901	29·319	24·411	20·684	17·793	37
38	45·624	40·787	36·649	30·024	25·062	21·279	18·326	38
39	46·393	41·562	37·416	30·752	25·736	21·894	18·889	39
40	47·156	42·332	38·178	31·477	26·404	22·509	19·444	**40**
41	47·893	43·073	38·911	32·167	27·038	23·085	19·963	41
42	48·621	43·806	39·636	32·852	27·666	23·648	20·467	42
43	49·352	44·543	40·364	33·538	28·294	24·210	20·971	43
44	50·108	45·304	41·120	34·257	28·957	24·805	21·504	44
45	50·885	46·092	41·905	35·010	29·653	25·440	22·074	**45**
46	51·694	46·919	42·734	35·810	30·400	26·127	22·696	46
47	52·542	47·788	43·607	36·662	31·204	26·873	23·378	47
48	53·439	48·711	44·542	37·586	32·087	27·697	24·141	48
49	54·406	49·715	45·565	38·610	33·077	28·639	25·030	49
50	55·429	50·782	46·658	39·714	34·164	29·679	26·022	**50**
51	56·509	51·914	47·824	40·905	35·347	30·831	27·126	51
52	57·598	53·060	49·008	42·124	36·558	32·015	28·267	52
53	58·699	54·222	50·211	43·371	37·804	33·238	29·459	53
54	59·812	55·399	51·436	44·648	39·089	34·507	30·696	54
55	60·948	56·605	52·694	45·967	40·431	35·842	32·007	**55**
56	62·096	57·830	53·977	47·319	41·812	37·229	33·370	56
57	63·260	59·077	55·286	48·710	43·243	38·668	34·800	57
58	64·413	60·315	56·591	50·105	44·687	40·121	36·252	58
59	65·512	61·494	57·833	51·433	46·062	41·514	37·644	59

E.G. The REVERSION to £100 payable at the death of 52—at **4** ℔ cent. is worth £19·008, or £49. 0*s.* 2*d.*: at **5** ℔ cent. £42·124, or £42. 2*s.* 6*d.*; and at **8** ℔ cent. £28·267, or £28. 5*s.* 4*d.*

PRESENT WORTH of the REVERSION of £100, payable at the DEATH of a Party of a given age, according to the CARLISLE Table of Mortality.

N.B. This Table shows the rate of interest which a purchaser may make of his money and replace his CAPITAL, provided the Party exists the average duration of Life.

Age	3 ℘ Cent.	3½ ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	Age
	£. Parts	£. Parts	£. Parts	£. Parts	£. Parts	£. Parts	£. Parts	
60	62·501	63·569	58·967	52·667	47·336	43·982	39·938	60
61	63·426	63·529	59·067	53·752	48·441	43·922	40·936	61
62	65·325	64·515	57·013	54·821	49·548	45·027	47·135	62
63	69·231	65·490	67·032	55·811	58·076	48·182	42·229	63
64	70·127	66·493	67·193	57·962	50·873	47·589	43·481	64
65	71·132	67·528	64·200	58·282	52·126	49·654	44·765	65
66	72·183	68·589	65·347	58·590	54·148	50·012	46·155	66
67	73·183	69·735	66·339	60·821	55·833	51·451	47·583	67
68	74·149	70·859	67·219	62·186	57·297	52·948	49·141	68
69	75·296	72·041	69·843	62·561	58·595	54·565	50·795	69
70	76·596	73·249	70·343	65·967	59·388	56·254	52·509	70
71	77·433	74·396	71·208	66·582	62·603	58·009	54·271	71
72	78·523	75·871	72·919	68·913	63·639	59·687	56·134	72
73	79·483	76·735	74·156	69·567	65·675	61·225	57·748	73
74	80·334	77·675	75·162	70·521	66·335	63·586	59·178	74
75	81·433	78·428	76·004	71·481	67·298	65·038	60·333	75
76	81·717	79·311	76·950	72·639	68·425	64·750	61·481	76
77	82·389	79·915	77·397	73·091	69·377	65·905	62·648	77
78	82·996	80·422	78·378	74·181	70·322	66·822	63·615	78
79	83·313	81·453	79·156	75·131	71·412	68·005	64·913	79
80	84·216	82·112	80·066	76·135	72·602	69·352	66·096	80
81	85·099	82·975	80·956	77·148	73·645	70·418	67·402	81
82	85·734	83·699	81·745	78·087	74·675	71·509	68·615	82
83	86·352	84·439	82·564	79·065	75·749	72·633	69·833	83
84	87·037	85·234	83·319	79·948	76·781	73·838	71·099	84
85	87·681	85·856	84·173	80·958	77·874	74·812	72·303	85
86	88·253	86·542	84·904	81·762	78·828	76·009	73·548	86
87	88·739	87·071	85·477	82·435	79·628	76·978	74·496	87
88	89·083	87·390	85·832	82·870	80·108	77·502	75·007	88
89	89·323	87·708	86·142	83·557	80·656	77·878	75·753	89
90	89·695	88·200	86·951	84·183	81·513	79·106	76·750	90

☞ If the REVERSION of £1 be required, remove the decimal point two places to the left.

E. G. The REVERSION to £100 payable at the death of 73—at 4 ℘ cent. is worth £73·929, or £73. 18s. 7d.—at 5 ℘ cent. £69·043, or £69. 0s. 10d.; at 8 ℘ cent. £63·638, or £63. 12s. 9d.

ANNUITY OR ANNUAL SINKING FUND to be set aside and accumulated at Compound Interest, in order to provide £100 at the end of any given number of years.

☞ By this Table may be readily seen what sum should be reserved annually—either during a LEASE to meet a FINE payable at its Renewal or at the end of a certain number of years, or to form a FUND for ENDOWMENT OF CHILDREN, &c.

Years.	3 ℔ Cent.	3¼ ℔ Cent.	3½ ℔ Cent.	4 ℔ Cent.	4½ ℔ Cent.	5 ℔ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
1	100·000	100·000	100·000	100·000	100·000	100·000	1
2	49·261	49·200	49·140	49·019	48·900	48·780	2
3	32·353	32·273	32·193	32·035	31·877	31·721	3
4	23·903	23·814	23·725	23·549	23·374	23·201	4
5	18·835	18·741	18·648	18·463	18·279	18·097	5
6	15·460	15·363	15·267	15·076	14·888	14·702	6
7	13·050	12·952	12·854	12·661	12·470	12·282	7
8	11·245	11·146	11·047	10·853	10·661	10·472	8
9	9·843	9·743	9·644	9·449	9·257	9·069	9
10	8·723	8·623	8·524	8·329	8·138	7·950	10
11	7·808	7·708	7·609	7·415	7·225	7·039	11
12	7·046	6·947	6·848	6·655	6·466	6·282	12
13	6·403	6·304	6·206	6·014	5·827	5·645	13
14	5·852	5·754	5·657	5·467	5·282	5·102	14
15	5·376	5·279	5·182	4·994	4·811	4·634	15
16	4·961	4·864	4·768	4·582	4·401	4·227	16
17	4·595	4·499	4·404	4·220	4·042	3·870	17
18	4·271	4·175	4·081	3·899	3·724	3·554	18
19	3·981	3·887	3·794	3·614	3·441	3·274	19
20	3·721	3·628	3·536	3·358	3·187	3·024	20
21	3·487	3·394	3·303	3·128	2·960	2·799	21
22	3·275	3·183	3·093	2·920	2·754	2·597	22
23	3·081	2·990	2·902	2·731	2·568	2·414	23
24	2·905	2·815	2·727	2·559	2·399	2·247	24
25	2·743	2·654	2·567	2·401	2·244	2·095	25
26	2·594	2·506	2·420	2·257	2·102	1·956	26
27	2·456	2·369	2·285	2·124	1·972	1·829	27
28	2·329	2·243	2·160	2·001	1·852	1·712	28
29	2·211	2·126	2·044	1·888	1·741	1·604	29
30	2·102	2·018	1·937	1·783	1·639	1·505	30
31	2·000	1·917	1·837	1·685	1·544	1·413	31
32	1·904	1·823	1·744	1·595	1·456	1·328	32
33	1·815	1·735	1·657	1·510	1·374	1·249	33
34	1·732	1·652	1·576	1·431	1·298	1·175	34

E.G. Required the Annual Sum which should be put aside to form a Fund to replace £100 paid for the Premium of a Lease for 21 years. At **3** ℔ cent. it is £3·487, or £3. 9*s*. 9*d*.: at **5** ℔ cent. it is £2·799, or very nearly £2. 16*s*.

Annuity or Annual Sinking Fund to be set aside and accumulated at Compound Interest, in order to provide £100 at the end of any given number of years.

☞ By this Table may be readily seen what sum should be reserved annually—either during a Lease to meet a Fine payable at its Renewal or at the end of a certain number of years, or to form a Fund for Endowment of Children, &c.

Years.	3 ⅌ Cent.	3¼ ⅌ Cent.	3½ ⅌ Cent.	4 ⅌ Cent.	4½ ⅌ Cent.	5 ⅌ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	35
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	36
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	38
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	39
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40
41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41
42	[illegible]	[illegible]	1·080	[illegible]	[illegible]	[illegible]	42
43	[illegible]	1·089	1·032	[illegible]	[illegible]	[illegible]	43
44	[illegible]	1·053	0·988	[illegible]	[illegible]	[illegible]	44
45	[illegible]	1·010	·945	[illegible]	[illegible]	[illegible]	45
46	1·036	0·969	[illegible]	[illegible]	[illegible]	[illegible]	46
47	0·996	·929	[illegible]	[illegible]	[illegible]	[illegible]	47
48	·958	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48
49	·921	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	49
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	50
51	[illegible]	[illegible]	[illegible]	[illegible]	·533	[illegible]	51
52	[illegible]	[illegible]	[illegible]	[illegible]	·508	[illegible]	52
53	[illegible]	[illegible]	[illegible]	[illegible]	·483	[illegible]	53
54	[illegible]	[illegible]	[illegible]	[illegible]	·460	[illegible]	54
55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	55
56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	56
57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57
58	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	58
59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	59
60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	·283	60
61	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	·268	61
62	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	·255	62
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	·242	63
64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64
65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	65
66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	66
67	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67
68	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	68
69	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	69
70	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70
71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71
72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	72
73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	73
74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	74

Annuity or Annual Sinking Fund to be set aside and accumulated at Compound Interest, in order to provide £100 at the end of any given number of years.

☞ By this Table may be readily seen what sum should be reserved annually—either during a Lease to meet a Fine payable at its Renewal or at the end of a certain number of years, or to form a Fund for Endowment of Children, &c.

Years.	3 ₽ Cent.	3¼ ₽ Cent.	3½ ₽ Cent.	4 ₽ Cent.	4½ ₽ Cent.	5 ₽ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
75	0·367	0·325	0·287	0·223	0·172	0·132	75
76	·355	·313	·276	·214	·164	·126	76
77	·343	·303	·266	·205	·157	·119	77
78	·332	·292	·257	·197	·150	·114	78
79	·321	·282	·247	·189	·143	·108	79
80	·311	·273	·238	·181	·137	·103	**80**
81	·301	·263	·230	·174	·131	·098	81
82	·291	·254	·221	·167	·125	·093	82
83	·282	·246	·213	·160	·119	·089	83
84	·273	·237	·206	·154	·114	·084	84
85	·264	·229	·198	·148	·109	·080	85
86	·256	·222	·191	·142	·104	·076	86
87	·248	·214	·185	·136	·100	·073	87
88	·240	·207	·178	·131	·095	·069	88
89	·233	·200	·172	·126	·091	·066	89
90	·225	·193	·166	·121	·087	·063	**90**
91	·218	·187	·160	·116	·083	·060	91
92	·212	·181	·154	·111	·080	·057	92
93	·205	·175	·149	·107	·076	·054	93
94	·199	·169	·143	·103	·073	·051	94
95	·192	·163	·138	·099	·070	·049	95
96	·186	·158	·134	·095	·067	·046	96
97	·181	·153	·129	·091	·064	·044	97
98	·175	·148	·124	·087	·061	·042	98
99	·170	·143	·120	·084	·058	·040	99
100	·164	·138	·116	·081	·056	·038	**100**

*** In case the Annuity to provide £1 is required, change the decimal point two places to the left, adding one 0, or two if necessary.

☞ The Annual Sum to be put aside for any Amount of Premium, or outlay for Repairs, &c., may be readily ascertained, if more than £100, by multiplying the total outlay by the figures opposite the number of years for which the Lease is to be held. From the result cut off 5 figures, which are the decimal parts of a pound; the value of the 3 first decimals will be found in the Pound Decimal Table (page 69), the 2 last are of no value.

For instance: A person has expended £841 in Premiums and Expenses on a Property held on Lease for 40 years. If he considers the rate of interest to be **3** ₽ cent., opposite 40 years is found £1·326, which, multiplied by £841, produces £11·15166. Abandoning the 2 last figures, we find by the Pound Decimal Table ·151 = 3*s.*: therefore the Annual Sum to be put aside as a Sinking Fund for 40 years, to replace the £841, is £11. 3*s.*

TABLE XIX.

The AMOUNT to which £100 will accumulate at COMPOUND INTEREST in any number of years not exceeding 100.

*** See POUND DECIMAL TABLE, page 79.

Years.	3 ℘ Cent.	3½ ℘ Cent.	3¾ ℘ Cent.	4 ℘ Cent.	4½ ℘ Cent.	5 ℘ Cent.	Years.
	£. Parts	£. Parts	£. Parts	£. Parts	£. Parts	£. Parts	
1	103·000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	110·250	2
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4
5	115·927	[illegible]	[illegible]	121·665	[illegible]	[illegible]	5
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	28
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30
31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	453·601	31
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	32
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	33
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34

E. G. If £100 be improved at COMPOUND INTEREST for 20 years, it will amount at 3 ℘ cent. to £180·611, or £180. 12s. 3d.

4 ... to £[illegible], or £[illegible]

5 ... to £[illegible], or £[illegible]

The AMOUNT to which £100 will accumulate at COMPOUND INTEREST in any number of years not exceeding 100.

*** See POUND DECIMAL TABLE, page 79.

Years.	3 ℘ Cent.	3¼ ℘ Cent.	3½ ℘ Cent.	4 ℘ Cent.	4½ ℘ Cent.	5 ℘ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
35	281·386	306·303	333·359	394·609	466·735	551·601	**35**
36	289·828	316·258	345·026	410·393	487·738	579·181	36
37	298·522	326·537	357·102	426·809	509·686	608·140	37
38	307·478	337·149	369·601	443·881	532·622	638·548	38
39	316·702	348·106	382·537	461·636	556·590	670·475	39
40	326·204	359·420	395·926	480·102	581·636	703·999	**40**
41	335·990	371·101	409·783	499·306	607·810	739·199	41
42	346·069	383·162	424·126	519·278	635·161	776·159	42
43	356·451	395·615	438·970	540·049	663·744	814·966	43
44	367·145	408·472	454·334	561·651	693·612	855·715	44
45	378·159	421·747	470·236	584·117	724·825	898·501	**45**
46	389·504	435·454	486·694	607·482	757·442	943·426	46
47	401·189	449·607	503·728	631·781	791·527	990·597	47
48	413·225	461·219	521·359	657·053	827·145	1040·127	48
49	425·622	479·306	539·606	683·335	864·367	1092·133	49
50	438·390	494·883	558·492	710·668	903·263	1146·740	**50**
51	451·542	510·967	578·040	739·095	943·910	1204·077	51
52	465·088	527·574	598·271	768·659	986·386	1264·281	52
53	479·041	544·720	619·211	799·405	1030·774	1327·495	53
54	493·412	562·423	640·883	831·381	1077·158	1393·869	54
55	508·215	580·702	663·314	864·636	1125·631	1463·563	**55**
56	523·461	599·575	686·530	899·222	1176·284	1536·741	56
57	539·165	619·061	710·558	935·191	1229·217	1613·578	57
58	555·340	639·180	735·428	972·598	1284·532	1694·257	58
59	572·000	659·954	761·168	1011·502	1342·335	1778·970	59
60	589·160	681·402	787·809	1051·963	1402·741	1867·918	**60**
61	606·835	703·548	815·382	1094·041	1465·864	1961·314	61
62	625·040	726·413	843·921	1137·803	1531·828	2059·380	62
63	643·791	750·021	873·458	1183·315	1600·760	2162·349	63
64	663·105	774·397	904·029	1230·647	1672·794	2270·467	64
65	682·998	799·565	935·670	1279·873	1748·070	2383·990	**65**
66	703·488	825·551	968·418	1331·068	1826·733	2503·189	66
67	724·593	852·381	1002·313	1384·311	1908·936	2628·349	67
68	746·330	880·084	1037·394	1439·683	1994·838	2759·766	68
69	768·720	908·686	1073·703	1497·271	2084·606	2897·755	69

E. G. If £100 be improved at COMPOUND INTEREST for 50 years, it will amount

at **3** ℘ cent. to £ 438·390, or £ 438. 8*s.* 9*d.*

4 „ to £ 710·668, or £ 710. 13*s.* 4*d.*

5 „ to £1146·740, or £1146. 14*s.* 10*d.*

The Amount to which £100 will accumulate at Compound Interest in any number of years not exceeding 100.

*** See Former Decimal Table, page 7[illegible].

Years.	3 ℘ Cent.	3¼ ℘ Cent.	3½ ℘ Cent.	4 ℘ Cent.	4½ ℘ Cent.	5 ℘ Cent.	Years.
	£. Dec.	£. Dec.	£. Dec.	£. Dec.	£. Dec.	£. Dec.	
70	791·762	[illegible]	[illegible]	1557·162	[illegible]	3042·642	70
71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71
72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	72
73	[illegible]	[illegible]	[illegible]	[illegible]	2185·632	3522·239	73
74	[illegible]	[illegible]	[illegible]	[illegible]	2597·798	3698·351	74
75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	75
76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	76
77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	77
78	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	78
79	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	79
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	80
81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	81
82	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	82
83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	83
84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	84
85	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	85
86	[illegible]	1565·111	[illegible]	[illegible]	4105·538	6641·707	86
87	[illegible]	1615·977	[illegible]	[illegible]	4503·808	6973·792	87
88	[illegible]	1666·496	[illegible]	[illegible]	4810·080	7322·482	88
89	[illegible]	1722·723	2130·142	[illegible]	5027·171	7688·606	89
90	[illegible]	[illegible]	2211·217	[illegible]	[illegible]	[illegible]	90
91	[illegible]	[illegible]	2288·610	[illegible]	[illegible]	[illegible]	91
92	[illegible]	[illegible]	2368·711	[illegible]	[illegible]	[illegible]	92
93	[illegible]	[illegible]	2451·616	[illegible]	[illegible]	[illegible]	93
94	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	94
95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	95
96	[illegible]	[illegible]	[illegible]	[illegible]	6541·698	10815·64[illegible]	96
97	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	97
98	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	98
99	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100

☞ If the amount of £1. be required, remove the decimal point two places to the left.

E.G. If £100 be improved at Compound Interest for 70 years, it will amount at 3 ℘ cent. to £ 791·762, or £ 791. 15s. 3d.

4 ,, to £1557·162, or £1557. 3s. 3d.

5 ,, to £3042·642, or £3042. 12s. 10d.

COMPOUND INTEREST.

TABLE showing the accumulating power of Money at different Rates of COMPOUND INTEREST, when the same is payable either YEARLY, HALF-YEARLY, or QUARTERLY.

NOMINAL RATE OF INTEREST.	PAYABLE.	THE AMOUNT OF £100 IN				
		1 Year.	5 Years.	25 Years	50 Years.	100 Years.
		£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.
2 ℔ cent.	Yearly	102·000	[illegible]	[illegible]	[illegible]	[illegible]
	Half-yearly	102·010	[illegible]	[illegible]	[illegible]	[illegible]
	Quarterly	102·015	[illegible]	[illegible]	[illegible]	[illegible]
3 ℔ cent.	Yearly	[illegible]	115·927	[illegible]	[illegible]	[illegible]
	Half-yearly	[illegible]	116·054	210·521	[illegible]	[illegible]
	Quarterly	[illegible]	116·119	[illegible]	[illegible]	[illegible]
4 ℔ cent.	Yearly	104·000	[illegible]	[illegible]	710·668	[illegible]
	Half-yearly	104·040	[illegible]	269·159	724·465	5248·490
	Quarterly	104·060	[illegible]	270·481	731·602	5352·411
5 ℔ cent.	Yearly	[illegible]	[illegible]	338·634	[illegible]	13150·126
	Half-yearly	[illegible]	[illegible]	343·711	[illegible]	13930·389
	Quarterly	[illegible]	[illegible]	346·340	1199·517	14386·109
6 ℔ cent.	Yearly	[illegible]	133·823	[illegible]	[illegible]	33930·209
	Half-yearly	[illegible]	134·392	[illegible]	[illegible]	36935·380
	Quarterly	[illegible]	134·685	[illegible]	[illegible]	38551·862
7 ℔ cent.	Yearly	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Half-yearly	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Quarterly	[illegible]	141·478	566·810	[illegible]	[illegible]
8 ℔ cent.	Yearly	108·000	[illegible]	684·847	4690·161	219976·126
	Half-yearly	108·160	[illegible]	710·668	5050·495	255071·976
	Quarterly	108·243	[illegible]	734·165	5218·490	275466·456
9 ℔ cent.	Yearly	109·000	[illegible]	[illegible]	[illegible]	[illegible]
	Half-yearly	109·203	[illegible]	[illegible]	[illegible]	[illegible]
	Quarterly	109·308	[illegible]	[illegible]	[illegible]	[illegible]
10 ℔ cent.	Yearly	110·000	[illegible]	1083·471	[illegible]	[illegible]
	Half-yearly	110·250	[illegible]	1146·740	[illegible]	[illegible]
	Quarterly	110·381	163·862	1181·372	13956·389	[illegible]

The Amount to which an Annuity of £1 ⅌ annum will accumulate at Compound Interest in any number of years not exceeding 100.

₊ See Prefixed Decimal Table, page 79.

Years.	3 ⅌ Cent.	3¼ ⅌ Cent.	3½ ⅌ Cent.	4 ⅌ Cent.	4½ ⅌ Cent.	5 ⅌ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
1	1·000	1·000	1·000	1·000	1·000	1·000	1
2	2·030	2·032	2·035	2·040	2·045	2·050	2
3	3·090	3·098	3·106	3·121	3·137	3·152	3
4	4·183	4·199	4·214	4·246	4·278	4·310	4
5	5·309	5·335	5·362	5·416	5·470	5·525	5
6	6·468	6·509	6·550	6·632	6·716	6·801	6
7	7·662	7·720	7·779	7·898	8·019	8·142	7
8	8·892	8·971	9·051	9·214	9·380	9·549	8
9	10·159	10·263	10·368	10·582	10·802	11·026	9
10	11·463	11·596	11·731	12·006	12·288	12·577	10
11	12·807	12·973	13·141	13·486	13·841	14·206	11
12	14·192	14·395	14·601	15·025	15·464	15·917	12
13	15·617	15·863	16·113	16·626	17·159	17·712	13
14	17·086	17·378	17·676	18·291	18·932	19·598	14
15	18·598	18·943	19·295	20·023	20·784	21·578	15
16	20·156	20·559	20·971	21·824	22·719	23·657	16
17	21·761	22·227	22·705	23·697	24·741	25·840	17
18	23·414	23·949	24·499	25·645	26·855	28·132	18
19	25·116	25·728	26·357	27·671	29·063	30·539	19
20	26·870	27·564	28·279	29·778	31·371	33·065	20
21	28·676	29·460	30·269	31·969	33·783	35·719	21
22	30·536	31·417	32·328	34·247	36·303	38·505	22
23	32·452	33·438	34·460	36·617	38·937	41·430	23
24	34·426	35·525	36·666	39·082	41·689	44·501	24
25	36·459	37·679	38·949	41·645	44·565	47·727	25
26	38·553	39·904	41·313	44·311	47·570	51·113	26
27	40·709	42·201	43·759	47·084	50·711	54·669	27
28	42·930	44·572	46·290	49·967	53·993	58·402	28
29	45·218	47·021	48·910	52·966	57·423	62·322	29
30	47·575	49·549	51·622	56·084	61·007	66·439	30
31	50·002	52·160	54·429	59·328	64·752	70·761	31
32	52·502	54·855	57·334	62·701	68·666	75·299	32
33	55·077	57·638	60·341	66·209	72·756	80·063	33
34	57·730	60·511	63·453	69·857	77·030	85·066	34

E. G. An Annuity of £1 ⅌ annum, accumulated for 21 years, will amount at 4 ⅌ cent. to £31·969, or £31. 19s. 4d.
5 „ to £35·719, or £35. 14s. 4d.

The AMOUNT to which an ANNUITY of £1 per annum will accumulate at Compound Interest in any number of years not exceeding 100.

_ See Pounds Decimal Table, page 70.

Years.	3 per Cent.	3½ per Cent.	3¾ per Cent.	4 per Cent.	4½ per Cent.	5 per Cent.	Years.
	£ Parts.	£ Parts.	£ Parts.	£ Parts.	£ Parts.	£ Parts.	
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	35
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	36
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	38
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	39
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40
41	[illegible]	[illegible]	[illegible]	[illegible]	112·846	[illegible]	41
42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42
43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43
44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44
45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	45
46	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	46
47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	47
48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48
49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	199·426	49
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	209·348	50
51	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	220·815	51
52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	232·856	52
53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	245·499	53
54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	54
55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	55
56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	56
57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57
58	151·780	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	58
59	157·333	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	59
60	163·053	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	60
61	168·945	185·707	[illegible]	[illegible]	[illegible]	[illegible]	61
62	175·013	192·742	[illegible]	[illegible]	[illegible]	[illegible]	62
63	[illegible]	200·006	220·989	[illegible]	[illegible]	[illegible]	63
64	[illegible]	207·507	229·722	[illegible]	[illegible]	[illegible]	64
65	[illegible]	[illegible]	238·753	[illegible]	[illegible]	[illegible]	65
66	[illegible]	[illegible]	248·119	[illegible]	[illegible]	[illegible]	66
67	[illegible]	[illegible]	257·904	[illegible]	[illegible]	[illegible]	67
68	[illegible]	[illegible]	267·927	[illegible]	[illegible]	[illegible]	68
69	[illegible]	[illegible]	278·301	[illegible]	[illegible]	[illegible]	69

E.G. An ANNUITY of £1 per annum, accumulated for 50 years, will amount at 4 per cent to £15[illegible], or £[illegible].
5 „ to £209·348, or £209. [illegible]

The Amount to which an Annuity of £1 ⅌ annum will accumulate at Compound Interest in any number of years not exceeding 100.

, See Foreign Decimal Tables, page 78.

Years.	3 ⅌ Cent.	3¼ ⅌ Cent.	3½ ⅌ Cent.	4 ⅌ Cent.	4½ ⅌ Cent.	5 ⅌ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
70	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70
71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71
72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	72
73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	73
74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	74
75	[illegible]	307·974	[illegible]	[illegible]	[illegible]	[illegible]	75
76	[illegible]	316·983	[illegible]	[illegible]	[illegible]	[illegible]	76
77	[illegible]	330·350	[illegible]	[illegible]	[illegible]	[illegible]	77
78	[illegible]	342·087	[illegible]	[illegible]	[illegible]	[illegible]	78
79	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	79
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	80
81	[illegible]	[illegible]	[illegible]	574·295	[illegible]	[illegible]	81
82	[illegible]	[illegible]	[illegible]	598·266	[illegible]	[illegible]	82
83	[illegible]	[illegible]	[illegible]	623·197	[illegible]	[illegible]	83
84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	84
85	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	85
86	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	86
87	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	87
88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	88
89	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	89
90	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1594·607	90
91	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	91
92	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	92
93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	93
94	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	94
95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	95
96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96
97	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	97
98	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	98
99	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100

E.G. An Annuity of £1 ⅌ annum, accumulated for 80 years, will amount
at 3 ⅌ cent. to £321·363, or £321. 7s. 3d.
4 „ to £551·245, or £551. 4s. 11d.
5 „ to £971·229, or £971. 4s. 7d.

The Annuity which £100 will purchase for any number of years not exceeding 100.

☞ By this Table may be readily seen what is the increase of Rent for a Premium paid for a Lease, or money expended in repairs.

N.B. This Table shows the rate of interest which a purchaser may make of his money, provided he can reinvest the surplus income, beyond the interest on the PURCHASE-MONEY, at the same rate of interest.

Years.	3 ℘ Cent.	3½ ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	10 ℘ Cent.	Years.
	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	
1	103·000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4
5	[illegible]	[illegible]	[illegible]	23·097	23·739	[illegible]	[illegible]	[illegible]	5
6	[illegible]	[illegible]	[illegible]	19·702	20·336	[illegible]	[illegible]	[illegible]	6
7	[illegible]	[illegible]	[illegible]	17·242	17·913	[illegible]	[illegible]	[illegible]	7
8	[illegible]	[illegible]	[illegible]	[illegible]	16·103	[illegible]	[illegible]	[illegible]	8
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9
10	[illegible]	12·024	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10
11	[illegible]	11·109	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11
12	[illegible]	10·348	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12·652	[illegible]	13
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12·129	[illegible]	14
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10·979	11·683	[illegible]	15
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10·586	11·297	[illegible]	16
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10·212	10·963	[illegible]	17
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	18
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21
22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22
23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23
24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24
25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25
26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26
27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	28
29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30
31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	32
33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	33
34	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34

E. G. £100 will purchase an Annuity for 20 years—

at 3 ℘ cent. of £6·721, or £6. 14s. 5d.
5 „ of £8·024, or £8. 0s. 6d.
6 „ of £8·718, or £8. 14s. 4d.

The Annuity which £100 will purchase for any number of years not exceeding 100.

By this Table may be readily seen what is the income of Rent for a Premium paid for a Lease, or money expended in repairs.

N.B. This Table shows the rate of interest which a purchaser may make of his money, provided he can re-invest the surplus income, beyond the interest on the [illegible], at the same rate of interest.

Years	3 p. Cent.	3½ p. Cent.	4 p. Cent.	5 p. Cent.	6 p. Cent.	7 p. Cent.	8 p. Cent.	10 p. Cent.	Years
	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	
35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8·550	[illegible]	**35**
36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8·534	[illegible]	36
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37
38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	38
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	39
40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**40**
41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41
42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42
43	[illegible]	[illegible]	4·905	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43
44	[illegible]	[illegible]	4·866	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44
45	[illegible]	[illegible]	4·826	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**45**
46	[illegible]	[illegible]	4·786	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	46
47	[illegible]	[illegible]	4·752	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	47
48	[illegible]	[illegible]	4·718	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48
49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	49
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**50**
51	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	51
52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	52
53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	53
54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	54
55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**55**
56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	56
57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57
58	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	58
59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	59
60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**60**
61	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	61
62	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	62
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63
64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64
65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	**65**
66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	66
67	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67
68	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	68
69	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	69

E. G. £100 will purchase an Annuity for 54 years—

at 3 p. cent. of £3·686, or £3. 13s. 9d.

5 ,, of £5·177, or £5. 3s. 7d.

6 ,, of £6·044, or £6. 0s. 11d.

The ANNUITY which £100 will purchase for any number of years not exceeding 100.

☞ By this Table may be readily seen what is the increase of Rent for a Premium paid for a Lease, or money expended in repairs.

N.B. This Table shows the rate of interest which a purchaser may make of his money, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY, at the same rate of interest.

Years.	3 ℔ Cent.	3½ ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	10 ℔ Cent.	Years.
	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	£. Parts.	
70	3·433	3·846	4·274	5·170	6·103	7·062	8·037	10·012	**70**
71	3·419	3·833	4·263	5·161	6·097	7·058	8·034	10·011	71
72	3·405	3·821	4·252	5·153	6·092	7·054	8·031	10·010	72
73	3·392	3·809	4·242	5·146	6·086	7·050	8·029	10·009	73
74	3·379	3·798	4·232	5·139	6·081	7·047	8·027	10·008	74
75	3·367	3·787	4·223	5·132	6·077	7·044	8·025	10·008	**75**
76	3·355	3·776	4·214	5·126	6·072	7·041	8·023	10·007	76
77	3·343	3·766	4·205	5·119	6·068	7·038	8·021	10·006	77
78	3·332	3·757	4·197	5·114	6·064	7·036	8·020	10·006	78
79	3·321	3·747	4·189	5·108	6·061	7·033	8·018	10·005	79
80	3·311	3·738	4·181	5·103	6·057	7·031	8·017	10·005	**80**
81	3·301	3·730	4·174	5·098	6·054	7·029	8·016	10·004	81
82	3·291	3·721	4·167	5·093	6·051	7·027	8·014	10·004	82
83	3·282	3·713	4·160	5·088	6·048	7·025	8·013	10·003	83
84	3·273	3·706	4·154	5·084	6·045	7·024	8·012	10·003	84
85	3·264	3·698	4·148	5·080	6·042	7·022	8·011	10·003	**85**
86	3·256	3·691	4·142	5·076	6·040	7·021	8·010	10·003	86
87	3·248	3·685	4·136	5·073	6·038	7·019	8·010	10·002	87
88	3·240	3·678	4·131	5·069	6·036	7·018	8·009	10·002	88
89	3·233	3·672	4·126	5·066	6·034	7·017	8·008	10·002	89
90	3·225	3·666	4·121	5·063	6·032	7·016	8·008	10·002	**90**
91	3·218	3·660	4·116	5·059	6·030	7·015	8·007	10·002	91
92	3·211	3·654	4·111	5·057	6·028	7·014	8·007	10·001	92
93	3·205	3·649	4·107	5·054	6·027	7·013	8·006	10·001	93
94	3·199	3·643	4·103	5·051	6·025	7·012	8·006	10·001	94
95	3·192	3·638	4·099	5·049	6·024	7·011	8·005	10·001	**95**
96	3·186	3·633	4·095	5·046	6·022	7·010	8·005	10·001	96
97	3·181	3·629	4·091	5·044	6·021	7·010	8·004	10·001	97
98	3·175	3·624	4·087	5·042	6·020	7·009	8·004	10·001	98
99	3·170	3·620	4·084	5·040	6·019	7·008	8·004	10·001	99
100	3·164	3·616	4·081	5·038	6·018	7·008	8·003	10·001	**100**

☞ By changing the decimal point two places to the left, and prefixing an 0 if necessary, the ANNUITY which £1 will purchase may be ascertained.

E. G. £100 will purchase an ANNUITY for 80 years—

at **3** ℔ cent. of £3·311, or £3. *6s. 3d.*

5 „ of £5·103, or £5. *2s. 1d.*

6 „ of £6·057, or £6. *1s. 2d.*

TABLE XXIII.

Present Worth of the Perpetuity of £100 Fine payable at every Interval of Years stated below.

Interval of Years being	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	8 ℔ Cent.	10 ℔ Cent.	Interval of Years being
	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	£ Parts	
2	[illegible]	1225·49	975·61	[illegible]	[illegible]	[illegible]	2
3	[illegible]	800·87	631·12	523·52	[illegible]	[illegible]	3
4	[illegible]	588·72	464·02	380·99	[illegible]	[illegible]	4
5	[illegible]	461·57	361·95	295·66	213·07	[illegible]	5
6	[illegible]	[illegible]	301·03	238·[illegible]	170·35	[illegible]	6
7	[illegible]	[illegible]	245·61	[illegible]	110·09	[illegible]	7
10	[illegible]	[illegible]	159·01	[illegible]	86·20	[illegible]	10
14	[illegible]	[illegible]	102·05	[illegible]	51·62	[illegible]	14
20	[illegible]	[illegible]	60·49	[illegible]	[illegible]	[illegible]	20
21	[illegible]	[illegible]	55·99	[illegible]	[illegible]	[illegible]	21
28	[illegible]	[illegible]	16·56	[illegible]	[illegible]	[illegible]	28

E.G. The present worth of the Perpetuity of £100 Fine, payable every 7 years on renewing lease, is at 4 ℔ cent. £[illegible], or £[illegible].
at 5 „ £245·61 or £245. 12s. 2d.

As the above values are immediately after a Fine has been paid for Renewal, if the Landlord's interest is to be valued, at an interval, say, of 2 years after the last Fine, then 2 years' Compound Interest must be added to the value.

☞ Copyhold Estates of Inheritance liable to Fine on Death or Alienation have been hitherto considered equivalent in value to an Estate renewable every 7 years at a Fine certain.

TABLE XXIV.

Amount of Fine to be paid for Renewing any number of years lapsed in a Lease originally granted for 10 years.

☞ The Answers show the Fine for each £100 of net income, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a party will make of his money, provided he can re-invest the surplus at the same rate of interest, so as to replace the [illegible] at the end of the Lease.

Years.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	9 ℔ Cent.	10 ℔ Cent.	£7 [illegible] ℔ Cent.	Years.
	Years' Purchase, or Pounds for each £100 a Year.									
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1
2	1·51	1·39	[illegible]	1·51	·05	[illegible]	[illegible]	[illegible]	[illegible]	2
3	[illegible]	2·11	[illegible]	[illegible]	·63	[illegible]	[illegible]	[illegible]	[illegible]	3
4	3·11	3·67	[illegible]	2·41	1·26	[illegible]	[illegible]	[illegible]	[illegible]	4
5	[illegible]	3·60	[illegible]	3·15	1·92	[illegible]	2·53	[illegible]	[illegible]	5
6	4·81	4·48	[illegible]	3·87	4·65	[illegible]	3·16	[illegible]	[illegible]	6
7	5·70	[illegible]	[illegible]	4·69	[illegible]	[illegible]	3·88	[illegible]	[illegible]	7
8	6·61	[illegible]	[illegible]	5·52	[illegible]	[illegible]	4·66	[illegible]	[illegible]	8
9	[illegible]	[illegible]	6·77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Total

E.G. The Fine a Tenant should pay for the Renewal of 4 years lapsed in a Lease of 10 years, in order that he may make 5 ℔ cent. on the money advanced, is 2·64, or nearly 2¾ years' purchase of the net income, and the Fine for each £100 of net income is £[illegible].

Amount of Fine to be paid for Renewing any number of years lapsed in a Lease originally granted for 20 years.

☞ The Answers show the Fine for each £100 of net income, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a party may make of his money, provided he can reinvest the surplus at the same rate of interest, so as to replace the fine at the end of the Lease.

Years.	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	[illegible] ℘ Cent.	Years.
	Years' Purchase, or Pounds for each £100 a Year of net income.									
	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	
1	55	45	38	31	26	21	18	15	10	1
2	1 12	93	77	64	53	41	37	31	21	2
3	1 71	1 42	1 19	99	83	69	59	49	33	3
4	2 31	1 94	1 62	1 36	1 15	97	81	69	47	4
5	2 94	2 47	2 08	1 76	1 48	1 26	1 07	91	63	5
6	3 58	3 03	2 56	2 17	1 85	1 57	1 31	1 15	80	6
7	4 21	3 60	3 07	2 62	2 24	1 91	1 61	1 41	1 00	7
8	4 92	4 20	3 60	3 08	2 65	2 28	1 97	1 70	1 22	8
9	5 62	4 83	4 15	3 58	3 09	2 68	2 32	2 02	1 47	9
10	6 35	5 48	4 74	4 11	3 57	3 11	2 71	2 37	1 75	10
11	7 09	6 15	5 35	4 67	4 08	3 57	3 13	2 75	2 06	11
12	7 86	6 86	6 00	5 26	4 62	4 07	3 59	3 18	2 41	12
13	8 65	7 59	6 67	5 89	5 20	4 61	4 09	3 64	2 81	13
14	9 46	8 35	7 38	6 55	5 83	5 19	4 61	4 16	3 25	14
15	10 30	9 11	8 13	7 26	6 49	5 82	5 21	4 72	3 75	15
16	11 16	9 96	8 91	8 00	7 21	6 50	5 89	5 34	4 31	16
17	12 05	10 81	9 74	8 80	7 97	7 24	6 60	6 02	4 94	17
18	12 96	11 70	10 60	9 63	8 78	8 03	7 37	6 78	5 61	18
19	13 91	12 63	11 51	10 53	9 66	8 89	8 21	7 60	6 44	19
Total	14 88	13 59	12 46	11 47	10 59	9 82	9 13	8 51	7 33	Total

E. G. The Fine a Tenant should pay for the Renewal of 7 years lapsed in a Lease of 20 years, in order that he may make 5 ℘ cent. on the money advanced, is 3 07, or a little more than 3 years' purchase of the net income; and the fine for each £100 of net income is £307.—If calculated at 6 ℘ cent., the fine would be 2 62, or very nearly 2⅝ years' purchase; and the fine for each £100 of net income is £262.

AMOUNT of FINE to be paid for RENEWING any number of years lapsed in a LEASE originally granted for 21 years.

☞ The Answers show the FINE for each £100 of NET INCOME, as well as the number of years' purchase.

N.B. This Table shows the rate of interest which a party may make of his money, provided he can re-invest the surplus at the same rate of interest, so as to replace the FINE at the end of the Lease.

Years.	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	7 ℘ Cent.	8 ℘ Cent.	9 ℘ Cent.	10 ℘ Cent.	£11·564 ℘ Cent.	Years.
	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR OF NET INCOME.									
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	
1	54	44	36	29	24	20	16	13	10	1
2	1 09	89	73	60	50	41	34	28	21	2
3	1 66	1 37	1 13	93	77	64	54	45	34	3
4	2 25	1 86	1 55	1 29	1 07	89	75	63	48	4
5	2 85	2 38	1 98	1 66	1 39	1 16	98	82	63	5
6	3 48	2 91	2 44	2 05	1 73	1 46	1 23	1 01	80	6
7	4 12	3 46	2 92	2 47	2 09	1 77	1 50	1 28	1 00	7
8	4 78	4 04	3 43	2 91	2 48	2 11	1 80	1 54	1 21	8
9	5 46	4 64	3 96	3 38	2 89	2 48	2 13	1 83	1 46	9
10	6 16	5 27	4 51	3 88	3 34	2 88	2 49	2 15	1 72	10
11	6 88	5 92	5 10	4 40	3 81	3 31	2 87	2 50	2 02	11
12	7 63	6 59	5 71	4 96	4 32	3 77	3 30	2 89	2 36	12
13	8 39	7 29	6 36	5 55	4 86	4 27	3 76	3 31	2 73	13
14	9 18	8 03	7 03	6 18	5 44	4 81	4 26	3 78	3 15	14
15	10 00	8 79	7 74	6 85	6 07	5 39	4 80	4 29	3 61	15
16	10 83	9 58	8 49	7 55	6 73	6 02	5 40	4 86	4 13	16
17	11 70	10 40	9 27	8 30	7 45	6 70	6 05	5 48	4 71	17
18	12 58	11 25	10 10	9 09	8 21	7 44	6 76	6 16	5 36	18
19	13 50	12 14	10 96	9 93	9 03	8 23	7 53	6 91	6 08	19
20	14 44	13 07	11 87	10 82	9 90	9 09	8 37	7 71	6 88	20
Total	15 41	14 03	12 82	11 76	10 83	10 02	9 29	8 65	7 78	Total

E. G. The FINE a Tenant should pay for the RENEWAL of 7 years lapsed in a Lease of 21 years, in order that he may make 5 ℘ cent. on the money advanced, is 2 92, or nearly 3 years' purchase of the NET INCOME; and the FINE for each £100 of NET INCOME is £292.—If calculated at 6 ℘ cent., the FINE would be 2 47, or nearly 2½ years' purchase; and the FINE for each £100 of NET INCOME is £247.

Amount of Fine to be paid for Renewing any number of years lapsed in a Lease originally granted for 40 years.

☞ The Answers show the Fine for each £100 of net income, as well as the number of years' purchase.

N. B. This Table shows the rate of interest which a party may make of his money, provided he can re-invest the surplus, beyond the available interest, at the same rate, so as to replace the Fine at the end of the Lease.

Years.	3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	9 ℔ Cent.	10 ℔ Cent.	Years.
	Years' Purchase, or Pounds for each £100 a Year of net income.								
	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	Years. Parts	
1	30	21	14	10	07	04	03	02	1
2	62	42	29	20	14	09	06	05	2
3	95	65	45	31	21	15	10	07	3
4	1 28	88	61	42	30	21	14	10	4
5	1 63	1 13	78	55	38	27	19	13	5
6	1 98	1 38	96	68	48	34	24	17	6
7	2 35	1 64	1 16	81	58	41	29	21	7
8	2 72	1 92	1 35	96	68	49	35	25	8
9	3 11	2 20	1 56	1 12	80	57	41	30	9
10	3 51	2 50	1 78	1 28	92	66	48	35	10
11	3 92	2 81	2 02	1 45	1 05	76	56	41	11
12	4 35	3 13	2 26	1 64	1 19	87	64	47	12
13	4 79	3 46	2 51	1 83	1 34	99	73	54	13
14	5 24	3 81	2 78	2 04	1 50	1 11	83	62	14
15	5 70	4 17	3 06	2 26	1 68	1 25	93	70	15
16	6 18	4 54	3 36	2 49	1 86	1 39	1 05	79	16
17	6 67	4 93	3 67	2 74	2 06	1 55	1 18	89	17
18	7 18	5 34	3 99	3 00	2 27	1 72	1 31	1 01	18
19	7 70	5 76	4 34	3 28	2 50	1 91	1 46	1 13	19
20	8 24	6 20	4 70	3 57	2 74	2 10	1 63	1 26	20
21	8 79	6 66	5 07	3 89	3 00	2 32	1 81	1 41	21
22	9 36	7 13	5 47	4 22	3 27	2 55	2 00	1 58	22
23	9 95	7 63	5 88	4 57	3 57	2 80	2 21	1 76	23
24	10 55	8 14	6 32	4 94	3 88	3 07	2 44	1 95	24
25	11 17	8 67	6 78	5 33	4 22	3 36	2 70	2 17	25
26	11 82	9 23	7 26	5 75	4 59	3 68	2 97	2 41	26
27	12 48	9 81	7 76	6 19	4 97	4 02	3 27	2 67	27
28	13 16	10 41	8 29	6 66	5 39	4 39	3 59	2 96	28
29	13 86	11 03	8 85	7 16	5 83	4 78	3 95	3 28	29
30	14 58	11 68	9 44	7 68	6 31	5 21	4 34	3 63	30
31	15 33	12 36	10 05	8 24	6 82	5 68	4 76	4 02	31
32	16 09	13 06	10 69	8 83	7 36	6 18	5 22	4 44	32
33	16 88	13 79	11 37	9 46	7 94	6 72	5 72	4 91	33
34	17 70	14 55	12 08	10 13	8 56	7 30	6 27	5 42	34
35	18 53	15 34	12 83	10 83	9 23	7 93	6 87	5 99	35
36	19 40	16 16	13 61	11 58	9 94	8 61	7 52	6 61	36
37	20 28	17 02	14 43	12 37	10 71	9 35	8 22	7 29	37
38	21 20	17 90	15 30	13 21	11 52	10 14	9 00	8 04	38
39	22 14	18 83	16 20	14 10	12 40	11 00	9 84	8 87	39
Total	23 11	19 79	17 16	15 04	13 33	11 92	10 76	9 78	Total

E. G. The Fine a Tenant should pay for the Renewal of 14 years lapsed in a Lease of 40 years, in order that he may make 6 ℔ cent. on the money advanced, is 2 04, or a very little more than 2 years' purchase of the net income; and the Fine for each £100 of net income is £204.

AMOUNT OF FINE to be paid for RENEWING with ONE LIFE the LEASE of an ESTATE originally granted on THREE LIVES, according to the **CARLISLE** Table of Mortality.

☞ The Answers show the amount of FINE for each £100 of NET INCOME, as well as the number of years' purchase such FINE amounts to.

N.B. This Table shows the rate of interest which a purchaser may make of his money, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY outstanding, at the same rate of interest.

Life put in.	Ages of Lives in Possession.	YEARS' PURCHASE, OR POUNDS FOR EACH £100 A YEAR. 3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	Ages of Lives in Possession.	Life put in.
		Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.		
	10 10	1 23	77	48	31	10 10	
	10 20	1 55	98	62	41	10 20	
	10 30	1 90	1 22	80	53	10 30	
	10 40	2 28	1 49	98	66	10 40	
	10 50	2 64	1 76	1 18	81	10 50	
	10 60	3 02	2 06	1 43	1 02	10 60	
	10 70	3 26	2 27	1 63	1 19	10 70	
	15 15	1 59	1 01	64	43	15 15	
	15 25	1 97	1 26	80	53	15 25	
	15 35	2 40	1 56	1 03	69	15 35	
	15 45	2 85	1 87	1 26	87	15 45	
	15 55	3 27	2 21	1 51	1 06	15 55	
	15 65	3 63	2 51	1 75	1 27	15 65	
	15 75	3 86	2 72	1 96	1 45	15 75	
	20 20	1 98	1 26	80	52	20 20	
10	20 30	2 47	1 60	1 03	69	20 30	10
	20 40	2 99	1 96	1 30	88	20 40	
	20 50	3 46	2 26	1 57	1 09	20 50	
	20 60	3 95	2 71	1 89	1 35	20 60	
	20 70	4 27	2 98	2 15	1 58	20 70	
	25 25	2 51	1 62	1 05	69	25 25	
	25 35	3 11	2 03	1 34	89	25 35	
	25 45	3 68	2 39	1 64	1 13	25 45	
	25 55	4 26	2 89	1 99	1 41	25 55	
	25 65	4 73	3 28	2 31	1 68	25 65	
	25 75	5 04	3 55	2 57	1 90	25 75	
	30 30	3 18	2 08	1 37	92	30 30	
	30 40	3 88	2 56	1 73	1 19	30 40	
	30 50	4 53	3 06	2 10	1 47	30 50	
	30 60	5 19	3 67	2 52	1 81	30 60	
	30 70	5 61	3 95	2 85	2 10	30 70	

E.G. The FINE a Tenant should pay for putting in a NEW LIFE, aged 10, in a LEASE originally granted on THREE LIVES, one of which has dropped, and the ages of the LIVES in possession being 30 and 60, in order to allow him 4 ℔ cent. interest on his money, is 3 67, or 3⅔ years' purchase of the NET INCOME; and the FINE for each £100 of NET INCOME is £367.

If calculated at 6 ℔ cent., the FINE is 1 81, or rather more than 1¾ year's purchase of the NET INCOME; and the FINE for each £100 of NET INCOME is £181.

AMOUNT of FINE to be paid for RENEWING with ONE LIFE the LEASE of an ESTATE originally granted on THREE LIVES, according to the CARLISLE Table of Mortality.

☞ The Answers show the amount of Fine for each £100 of rent reserved, as well as the number of years' purchase each Fine amounts to.

N.B. This Table shows the rate of interest which a purchaser may make of his money, [illegible] the same rate of interest.

Life put in.	Ages of Lives in Possession.	3 ℘ Cent.	4 ℘ Cent.	5 ℘ Cent.	6 ℘ Cent.	Ages of Lives in Possession.	Life put in.
		Years' Purchase, or Pounds for each £100 a Year.					
		Years Parts	Years Parts	Years Parts	Years Parts		
10	35 35	2 93	2 29	1 71	1 19	35 35	10
	35 45	4 74	3 37	2 15	1 48	35 45	
	35 55	5 51	3 89	2 65	1 88	35 55	
	35 65	6 15	4 39	3 06	2 23	35 65	
	35 75	6 55	4 65	3 38	2 42	35 75	
	40 40	4 95	3 85	2 80	1 55	40 40	
	40 50	5 81	3 87	2 74	1 96	40 50	
	40 60	6 71	4 89	3 35	2 45	40 60	
	40 70	7 28	5 08	3 76	2 70	40 70	
	45 45	5 85	4 81	2 78	1 86	45 45	
	45 55	7 07	4 55	3 50	2 54	45 55	
	45 65	7 93	5 61	4 08	2 81	45 65	
	45 75	8 16	6 20	4 48	3 21	45 75	
	50 50	7 28	5 82	3 55	2 56	50 50	
	50 60	8 56	6 11	4 45	3 28	50 60	
	50 70	9 61	6 83	5 04	3 80	50 70	
	55 55	8 83	6 22	4 60	3 42	55 55	
	55 65	10 22	7 41	5 36	4 27	55 65	
	55 75	11 13	8 06	6 23	4 82	55 75	
	60 60	10 58	7 76	5 88	4 61	60 60	
	60 70	12 03	8 80	6 96	5 33	60 70	
	65 65	12 24	9 16	6 98	5 63	65 65	
	65 75	13 73	10 66	8 13	6 64	65 75	
	70 70	14 16	10 83	8 45	6 71	70 70	
	75 75	15 93	12 61	9 97	7 98	75 75	
15	20 20	1 56	1 89	73	48	20 20	15
	20 30	2 16	1 38	94	65	20 30	
	20 40	2 56	1 72	1 18	82	20 40	
	20 50	3 01	2 03	1 42	1 06	20 50	
	20 60	3 19	2 42	1 74	1 27	20 60	
	20 70	3 86	2 76	1 98	1 45	20 70	

E. G. The Fine a Tenant should pay for putting in a New Life, aged 15, in a Lease originally granted on Three Lives, one of which has dropped, and the ages of the Lives in possession being [illegible]

If calculated at 5 ℘ cent., [illegible]

AMOUNT of FINE to be paid for RENEWING with ONE LIFE the LEASE of an ESTATE originally granted on THREE LIVES, according to the CARLISLE Table of Mortality.

☞ The Answers show the amount of FINE for each £100 of NET INCOME, as well as the number of years' purchase such FINE amounts to.

N.B. This Table shows the rate of interest which a purchaser may make of his money, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY outstanding, at the same rate of interest.

Life put in.	Ages of Lives in Possession.	Years' Purchase, or Pounds for each £100 a Year. 3 per Cent.	4 per Cent.	5 per Cent.	6 per Cent.	Ages of Lives in Possession.	Life put in.
		Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.		
15	30 30	2.72	1.81	1.24	.86	30 30	15
	30 40	3.27	2.23	1.56	1.09	30 40	
	30 50	3.99	2.73	1.98	1.35	30 50	
	30 60	4.62	3.24	2.33	1.70	30 60	
	30 70	5.06	3.60	2.62	1.93	30 70	
	40 40	4.28	2.91	2.03	1.43	40 40	
	40 50	5.19	3.59	2.53	1.81	40 50	
	40 60	6.06	4.29	3.13	2.28	40 60	
	40 70	6.62	4.73	3.53	2.62	40 70	
	50 50	6.52	4.59	3.39	2.60	50 50	
	50 60	7.64	5.46	4.16	3.10	50 60	
	50 70	8.67	6.26	4.78	3.63	50 70	
	60 60	9.83	7.21	5.49	4.20	60 60	
	60 70	11.22	8.41	6.52	5.10	60 70	
	70 70	13.51	10.27	8.08	6.46	70 70	
20	20 20	1.38	.95	.63	.43	20 20	20
	20 30	1.75	1.20	.85	.57	20 30	
	20 40	2.17	1.49	1.03	.73	20 40	
	20 50	2.58	1.79	1.26	.90	20 50	
	20 60	3.04	2.16	1.57	1.16	20 60	
	20 70	3.34	2.42	1.79	1.33	20 70	
	30 30	2.28	1.56	1.09	.73	30 30	
	30 40	2.88	1.98	1.38	.96	30 40	
	30 50	3.45	2.40	1.70	1.23	30 50	
	30 60	4.06	2.90	2.11	1.56	30 60	
	30 70	4.67	3.35	2.40	1.81	30 70	
	40 40	3.70	2.57	1.80	1.29	40 40	
	40 50	4.56	3.20	2.29	1.66	40 50	
	40 60	5.41	3.89	2.84	2.11	40 60	
	40 70	5.93	4.25	3.24	2.45	40 70	

E.G. The FINE a Tenant should pay for putting in a NEW LIFE, aged 15, in a LEASE originally granted for THREE LIVES, one of which has dropped, and the ages of the Lives in possession being 60 and 70, in order to allow him 4 per cent. interest on his money, is 8.41, or very nearly 8½ years' purchase of the NET INCOME; and the FINE for each £100 of NET INCOME is £841.

If calculated at 6 per cent., the FINE is 5.10, or very little above 5 years' purchase of the NET INCOME; and the FINE for each £100 of NET INCOME is £510.

AMOUNT of FINE to be paid for RENEWING with ONE LIFE the LEASE of an ESTATE originally granted on THREE LIVES, according to the CARLISLE Table of Mortality.

☞ The Answers show the amount of FINE for each £100 of NET INCOME, as well as the number of years' purchase such FINE amounts to.

N.B. This Table shows the rate of interest which a purchaser may make of his money, provided he can re-invest the surplus income, beyond the interest on the PURCHASE-MONEY outstanding, at the same rate of interest.

Life put in.	Ages of Lives in Possession.	Years' Purchase, or Pounds for each £100 a Year. 3 ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	Ages of Lives in Possession.	Life put in.
		Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.		
20	50 50	5 82	4 16	3 01	2 21	50 50	20
	50 60	7 11	5 20	3 86	2 91	50 60	
	50 70	7 92	5 89	4 44	3 41	50 70	
	60 60	9 03	6 76	5 15	3 98	60 60	
	60 70	10 42	7 95	6 17	4 86	60 70	
	70 70	12 47	9 72	7 70	6 20	70 70	
30	30 30	1 48	1 10	81	60	30 30	30
	30 40	1 93	1 39	1 01	75	30 40	
	30 50	2 32	1 72	1 26	93	30 50	
	30 60	2 93	2 17	1 64	1 25	30 60	
	30 70	3 31	2 49	1 91	1 48	30 70	
	40 40	2 53	1 83	1 34	99	40 40	
	40 50	3 23	2 35	1 74	1 29	40 50	
	40 60	4 01	2 98	2 25	1 71	40 60	
	40 70	4 51	3 41	2 62	2 03	40 70	
	50 50	4 30	3 16	2 36	1 77	50 50	
	50 60	5 49	4 13	3 14	2 42	50 60	
	50 70	6 25	4 77	3 69	2 89	50 70	
	60 60	7 26	5 58	4 34	3 42	60 60	
	60 70	8 57	6 70	5 31	4 25	60 70	
	70 70	10 52	8 39	6 77	5 53	70 70	
40	40 40	1 54	1 16	90	69	40 40	40
	40 50	1 98	1 50	1 15	88	40 50	
	40 60	2 64	2 03	1 59	1 25	40 60	
	40 70	3 08	2 42	1 92	1 53	40 70	
	50 50	2 75	2 04	1 62	1 25	50 50	
	50 60	3 77	2 93	2 29	1 81	50 60	
	50 70	4 46	3 51	2 80	2 24	50 70	
	60 60	5 30	4 20	3 35	2 70	60 60	
	60 70	6 51	5 23	4 25	3 48	60 70	
	70 70	8 33	6 81	5 62	4 68	70 70	

E.G. The FINE a Tenant should pay for putting in a NEW LIFE, aged 30, in a LEASE originally granted on THREE LIVES, one of which has dropped, and the ages of the Lives in possession being 40 and 60, in order to allow him 5 ℔ cent. interest on his money, is 2 25, or 2¼ years' purchase of the NET INCOME; and the FINE for each £100 of NET INCOME is £225.

If calculated at 6 ℔ cent., the FINE is 1 71, or nearly 1¾ year's purchase of the NET INCOME; and the FINE for each £100 of NET INCOME is £171.

Amount of Fine to be paid for Renewing with Two Lives the Lease of an Estate originally granted on Three Lives, according to the **Carlisle** Table of Mortality.

☞ The Answers show the amount of fine for each £100 of net income, as well as the number of years' purchase such fine amounts to.

N.B. This Table shows the rate of interest which the purchaser may make of his money, provided he can re-invest the surplus income, beyond the interest on the purchase-money outstanding, at the same rate of interest.

Ages of the Lives to be put in.	Age of the Life in Possession.	Years' Purchase, or Pounds for each £100 a Year. 3 ꝑ Cent.	4 ꝑ Cent.	5 ꝑ Cent.	6 ꝑ Cent.	Age of the Life in Possession.	Ages of the Lives to be put in.
		Years. Parts	Years. Parts	Years. Parts	Years. Parts		
10 & 10	20	6 19	4 30	3 07	2 26	20	10 & 10
	30	8 00	5 61	4 05	3 01	30	
	40	10 19	7 24	5 27	3 94	40	
	50	12 84	9 31	6 89	5 23	50	
	60	16 57	12 45	9 57	7 52	60	
	70	19 90	15 37	12 17	9 83	70	
10 & 15	25	6 76	4 75	3 42	2 55	25	10 & 15
	35	8 69	6 17	4 49	3 36	35	
	45	11 05	7 94	5 86	4 42	45	
	55	14 32	10 63	8 04	6 24	55	
	65	17 76	13 57	10 58	8 44	65	
	75	21 13	16 61	13 37	10 97	75	
10 & 20	30	7 42	5 29	3 84	2 88	30	10 & 20
	40	9 55	6 87	5 05	3 82	40	
	50	12 16	8 85	6 66	5 09	50	
	60	15 86	12 03	9 31	7 36	60	
	70	19 18	14 94	11 91	9 67	70	
10 & 25	35	8 12	5 73	4 28	3 41	35	10 & 25
	45	10 39	7 51	5 61	4 26	45	
	55	13 65	10 21	7 79	6 07	55	
	65	17 07	13 14	10 32	8 27	65	
	75	20 44	16 18	13 10	10 79	75	
15 & 20	30	7 01	5 07	3 75	2 84	30	15 & 20
	40	9 13	6 63	4 94	3 75	40	
	50	11 71	8 64	6 52	5 01	50	
	60	15 40	11 75	9 16	7 28	60	
	70	18 70	14 65	11 72	9 54	70	
20 & 20	30	6 70	4 87	3 62	2 76	30	20 & 20
	40	8 73	6 40	4 79	3 66	40	
	50	11 27	8 38	6 35	4 90	50	
	60	14 95	11 48	8 99	7 17	60	
	70	18 25	14 38	11 54	9 43	70	

E.G. The Fine a Tenant should pay for putting in Two New Lives, aged 10 and 15, in a Lease originally granted for Three Lives, two of which have dropped, and the age of the Life in possession being 55, in order to allow him **5** ꝑ cent. interest on his money, is 8 04, or 8 years' purchase of the net income; and the fine for each £100 of net income is £804.

If calculated at **6** ꝑ cent., the fine is 6 24, or 6¼ years' purchase of the net income; and the fine for each £100 of net income is £624.

COMPARATIVE TABLES,

SHOWING THE RATE OF MORTALITY OR NUMBER OF PERSONS LIVING AT EVERY AGE FROM BIRTH TO **90**, OUT OF **10,000** BORN, ACCORDING TO THE OBSERVATIONS MADE IN LONDON, NORTHAMPTON, AND CARLISLE; WITH THE DECREMENT OR DEATHS FROM YEAR TO YEAR; THE INTENSITY OF LIFE OR PROPORTION OF SURVIVORS TO DEATHS IN EACH YEAR; AND THE EXPECTATION OF LIFE OR NUMBER OF YEARS A PARTY OF A GIVEN AGE MAY EXPECT TO LIVE.

TABLE

COMPARATIVE

Showing the Rate of Mortality or Number of Persons Living at every age in LONDON, NORTHAMPTON, and CARLISLE; with the DECREMENT of SURVIVORS to DEATHS in each Year; and the EXPECTATION of

LONDON MORTALITY. (SIMPSON, 1728–1737.)						NORTHAMPTON MOR-		
Age.	Number Living.	Decrement or Deaths in the next Year.	Intensity of Life or Proportion of Survivors to Deaths in each Year.	Expectation of Life. (Years. Parts)	Age.	Age.	Number Living.	Decrement or Deaths in the next Year.
Birth	10,000	3,191	$3\frac{1}{8}$ to 1	18 93	Birth	Birth	10,000	2,575
1	6,809	1,235	$5\frac{1}{2}$ „ 1	26 57	1	1	7,425	1,173
2	5,574	538	$10\frac{3}{8}$ „ 1	31 35	2	2	6,252	431
3	5,036	360	14 „ 1	33 64	3	3	5,821	288
4	4,676	243	$19\frac{1}{4}$ „ 1	35 20	4	4	5,533	169
5	4,433	150	$29\frac{1}{2}$ „ 1	36 11	5	5	5,364	158
6	4,283	114	$37\frac{1}{2}$ „ 1	36 34	6	6	5,206	120
7	4,169	83	$50\frac{1}{4}$ „ 1	36 33	7	7	5,086	95
8	4,086	68	60 „ 1	36 05	8	8	4,991	68
9	4,018	54	$74\frac{3}{8}$ „ 1	35 66	9	9	4,923	52
10	3,964	52	$76\frac{1}{4}$ „ 1	35 14	10	10	4,871	44
11	3,912	51	$75\frac{1}{4}$ „ 1	34 60	11	11	4,827	43
12	3,861	51	$77\frac{1}{4}$ „ 1	34 06	12	12	4,784	43
13	3,810	47	81 „ 1	33 49	13	13	4,741	43
14	3,763	45	$83\frac{5}{8}$ „ 1	32 91	14	14	4,698	43
15	3,718	45	$82\frac{5}{8}$ „ 1	32 30	15	15	4,655	43
16	3,673	47	$78\frac{1}{8}$ „ 1	31 69	16	16	4,612	45
17	3,626	47	$77\frac{1}{2}$ „ 1	31 10	17	17	4,567	50
18	3,579	48	$74\frac{1}{2}$ „ 1	30 50	18	18	4,517	54
19	3,531	48	$73\frac{1}{2}$ „ 1	29 91	19	19	4,463	58
20	3,483	48	$72\frac{1}{2}$ „ 1	29 31	20	20	4,405	62
21	3,435	52	66 „ 1	28 72	21	21	4,343	64
22	3,383	53	$63\frac{7}{8}$ „ 1	28 15	22	22	4,279	64
23	3,330	55	$60\frac{1}{2}$ „ 1	27 58	23	23	4,215	65
24	3,275	56	$58\frac{1}{2}$ „ 1	27 04	24	24	4,150	64
25	3,219	57	$56\frac{1}{2}$ „ 1	26 51	25	25	4,086	65
26	3,162	56	$56\frac{1}{2}$ „ 1	25 97	26	26	4,021	64
27	3,106	57	$54\frac{1}{2}$ „ 1	25 43	27	27	3,957	64
28	3,049	63	$48\frac{3}{8}$ „ 1	24 90	28	28	3,893	65
29	2,986	63	$47\frac{3}{8}$ „ 1	24 41	29	29	3,828	64
30	2,923	64	$45\frac{3}{8}$ „ 1	23 93	30	30	3,764	64

TABLE

from Birth to 90, out of 10,000 Born, according to the Observations made or DEATHS from Year to Year; the INTENSITY OF LIFE or Proportion LIFE or number of Years a party of a given age may expect to live.

TALITY. (PRICE, 1735–1780.)			CARLISLE MORTALITY. (MYLNE, 1779–1787.)					
INTENSITY of LIFE or Proportion of SURVIVORS to DEATHS in each Year.	EXPECTATION of LIFE.	Age.	Age.	Number Living.	DECREMENT or DEATHS in the next Year.	INTENSITY of LIFE or Proportion of SURVIVORS to DEATHS in each Year.	EXPECTATION of LIFE.	Age.
	Years. Parts						Yrs. Parts	
$3\frac{7}{8}$ to 1	25 18	Birth	Birth	10,000	1,539	$6\frac{1}{2}$ to 1	38 72	Birth
$6\frac{1}{7}$ „ 1	32 74	**1**	**1**	8,461	682	$12\frac{5}{8}$ „ 1	44 68	**1**
$14\frac{1}{2}$ „ 1	37 79	2	2	7,779	505	$15\frac{3}{8}$ „ 1	47 55	2
$20\frac{1}{2}$ „ 1	39 55	3	3	7,274	276	$26\frac{3}{8}$ „ 1	49 82	3
$32\frac{3}{4}$ „ 1	40 58	4	4	6,998	201	$34\frac{7}{8}$ „ 1	50 76	4
34 „ 1	40 84	**5**	**5**	6,797	121	$56\frac{1}{4}$ „ 1	51 25	**5**
$43\frac{3}{8}$ „ 1	41 07	6	6	6,676	82	$81\frac{1}{2}$ „ 1	51 17	6
$53\frac{1}{2}$ „ 1	41 03	7	7	6,594	58	$113\frac{3}{8}$ „ 1	50 80	7
$73\frac{3}{8}$ „ 1	40 79	8	8	6,536	43	152 „ 1	50 24	8
$94\frac{3}{5}$ „ 1	40 36	9	9	6,493	33	$196\frac{3}{8}$ „ 1	49 57	9
$110\frac{3}{5}$ „ 1	39 78	**10**	**10**	6,460	29	$222\frac{3}{5}$ „ 1	48 82	**10**
$112\frac{1}{4}$ „ 1	39 14	11	11	6,431	31	$207\frac{1}{3}$ „ 1	48 04	11
$111\frac{1}{4}$ „ 1	38 49	12	12	6,400	32	200 „ 1	47 27	12
$110\frac{1}{4}$ „ 1	37 83	13	13	6,368	33	193 „ 1	46 51	13
$109\frac{1}{4}$ „ 1	37 17	14	14	6,335	35	181 „ 1	45 75	14
$108\frac{1}{4}$ „ 1	36 51	**15**	**15**	6,300	39	$161\frac{1}{2}$ „ 1	45 00	**15**
$102\frac{1}{2}$ „ 1	35 85	16	16	6,261	42	149 „ 1	44 27	16
$91\frac{1}{11}$ „ 1	35 20	17	17	6,219	43	$144\frac{5}{8}$ „ 1	43 57	17
$83\frac{5}{8}$ „ 1	34 58	18	18	6,176	43	$143\frac{5}{8}$ „ 1	42 87	18
77 „ 1	33 99	19	19	6,133	43	$142\frac{5}{8}$ „ 1	42 17	19
71 „ 1	33 43	**20**	**20**	6,090	43	$141\frac{5}{8}$ „ 1	41 46	**20**
$67\frac{2}{7}$ „ 1	32 90	21	21	6,047	42	144 „ 1	40 75	21
$66\frac{3}{8}$ „ 1	32 39	22	22	6,005	42	143 „ 1	40 04	22
$64\frac{1}{2}$ „ 1	31 88	23	23	5,963	42	142 „ 1	39 31	23
$64\frac{3}{4}$ „ 1	31 36	24	24	5,921	42	141 „ 1	38 59	24
$62\frac{1}{2}$ „ 1	30 85	**25**	**25**	5,879	43	$136\frac{3}{4}$ „ 1	37 86	**25**
$62\frac{3}{8}$ „ 1	30 33	26	26	5,836	43	$135\frac{5}{8}$ „ 1	37 14	26
$61\frac{7}{8}$ „ 1	29 82	27	27	5,793	45	$128\frac{5}{8}$ „ 1	36 41	27
$59\frac{7}{8}$ „ 1	29 30	28	28	5,748	50	115 „ 1	35 69	28
$59\frac{7}{8}$ „ 1	28 79	29	29	5,698	56	$101\frac{3}{4}$ „ 1	35 00	29
$58\frac{7}{8}$ „ 1	28 27	**30**	**30**	5,642	57	99 „ 1	34 34	**30**

COMPARATIVE

Showing the Rate of Mortality or Number of Persons Living at every age in LONDON, NORTHAMPTON, and CARLISLE; with the DECREMENT SURVIVORS to DEATHS in each Year; and the EXPECTATION of

LONDON MORTALITY. (SIMPSON, 1728–1737.)						NORTHAMPTON MOR-		
Age.	Number Living.	Decrement or Deaths in the next Year.	Intensity of Life or Proportion of Survivors to Deaths in each Year.	Expectation of Life.	Age.	Age.	Number Living.	Decrement or Deaths in the next Year.
				Years Parts				
31	2,859	65	44 to 1	23 46	31	31	3,700	65
32	2,794	64	$43\frac{3}{5}$,, 1	22 98	32	32	3,635	64
33	2,730	65	42 ,, 1	22 51	33	33	3,571	65
34	2,665	65	41 ,, 1	22 05	34	34	3,506	64
35	2,600	65	40 ,, 1	21 59	**35**	**35**	3,442	64
36	2,535	65	39 ,, 1	21 13	36	36	3,378	65
37	2,470	66	$37\frac{1}{2}$,, 1	20 68	37	37	3,313	64
38	2,404	68	$35\frac{1}{4}$,, 1	20 23	38	38	3,249	64
39	2,336	72	$32\frac{1}{2}$,, 1	19 80	39	39	3,185	65
40	2,264	70	$32\frac{1}{3}$,, 1	19 42	**40**	**40**	3,120	65
41	2,194	73	30 ,, 1	19 02	41	41	3,055	66
42	2,121	73	29 ,, 1	18 66	42	42	2,989	67
43	2,048	70	$29\frac{1}{4}$,, 1	18 31	43	43	2,922	67
44	1,978	70	$28\frac{1}{4}$,, 1	17 93	44	44	2,855	67
45	1,908	68	28 ,, 1	17 57	**45**	**45**	2,788	67
46	1,840	69	$26\frac{2}{3}$,, 1	17 21	46	46	2,721	67
47	1,771	69	$25\frac{1}{2}$,, 1	16 86	47	47	2,654	67
48	1,702	63	27 ,, 1	16 52	48	48	2,587	67
49	1,639	62	$26\frac{5}{8}$,, 1	16 13	49	49	2,520	68
50	1,577	62	$25\frac{5}{8}$,, 1	15 75	**50**	**50**	2,452	69
51	1,515	62	$24\frac{2}{3}$,, 1	15 37	51	51	2,383	71
52	1,453	60	$24\frac{1}{4}$,, 1	15 01	52	52	2,312	70
53	1,393	57	$24\frac{1}{2}$,, 1	14 63	53	53	2,242	70
54	1,336	56	$23\frac{7}{8}$,, 1	14 24	54	54	2,172	71
55	1,280	55	$23\frac{1}{4}$,, 1	13 84	**55**	**55**	2,101	70
56	1,225	56	$21\frac{7}{8}$,, 1	13 44	56	56	2,031	70
57	1,169	51	$22\frac{5}{8}$,, 1	13 05	57	57	1,961	71
58	1,118	50	$22\frac{1}{2}$,, 1	12 63	58	58	1,890	70
59	1,068	54	$19\frac{3}{4}$,, 1	12 20	59	59	1,820	71
60	1,014	52	$19\frac{1}{2}$,, 1	11 81	**60**	**60**	1,749	70

TABLE

from Birth to 90, out of 10,000 Born, according to the Observations made or DEATHS from Year to Year; the INTENSITY OF LIFE or Proportion of LIFE or number of Years a party of a given age may expect to live.

TALITY. (PRICE, 1735–1780.)			CARLISLE MORTALITY. (MYLNE, 1779–1787.)					
INTENSITY OF LIFE or Proportion of SURVIVORS to DEATHS in each Year.	EXPECTATION of LIFE.	Age.	Age.	Number Living.	DECREMENT or DEATHS in the next Year.	INTENSITY of LIFE or Proportion of SURVIVORS to DEATHS in each Year.	EXPECTATION of LIFE.	Age.
	Years. Parts						Yrs. Parts	
56¾ to 1	27 76	31	31	5,585	57	98 to 1	33 68	31
56¾ „ 1	27 24	32	32	5,528	56	98¾ „ 1	33 03	32
55 „ 1	26 72	33	33	5,472	55	99½ „ 1	32 36	33
54¾ „ 1	26 20	34	34	5,417	55	98½ „ 1	31 68	34
53¾ „ 1	25 68	**35**	**35**	5,362	55	97½ „ 1	31 00	**35**
52 „ 1	25 16	36	36	5,307	56	94¾ „ 1	30 32	36
51¾ „ 1	24 64	37	37	5,251	57	92½ „ 1	29 64	37
50¾ „ 1	24 12	38	38	5,194	58	89½ „ 1	28 96	38
49 „ 1	23 60	39	39	5,136	61	84½ „ 1	28 28	39
48 „ 1	23 08	**40**	**40**	5,075	66	76¾ „ 1	27 61	**40**
46½ „ 1	22 56	41	41	5,009	69	72½ „ 1	26 97	41
44½ „ 1	22 04	42	42	4,940	71	69½ „ 1	26 34	42
43½ „ 1	21 54	43	43	4,869	71	68½ „ 1	25 71	43
42½ „ 1	21 03	44	44	4,798	71	67½ „ 1	25 09	44
41½ „ 1	20 52	**45**	**45**	4,727	70	67½ „ 1	24 46	**45**
40½ „ 1	20 02	46	46	4,657	69	67½ „ 1	23 82	46
39½ „ 1	19 51	47	47	4,588	67	68½ „ 1	23 17	47
38½ „ 1	19 00	48	48	4,521	63	71¾ „ 1	22 50	48
37 „ 1	18 49	49	49	4,458	61	73 „ 1	21 81	49
35½ „ 1	17 99	**50**	**50**	4,397	59	74½ „ 1	21 11	**50**
33½ „ 1	17 50	51	51	4,338	62	70 „ 1	20 39	51
33 „ 1	17 02	52	52	4,276	65	65¾ „ 1	19 68	52
32 „ 1	16 54	53	53	4,211	68	61¾ „ 1	18 97	53
30½ „ 1	16 06	54	54	4,143	70	59½ „ 1	18 28	54
30 „ 1	15 58	**55**	**55**	4,073	73	55¾ „ 1	17 58	**55**
29 „ 1	15 10	56	56	4,000	76	52½ „ 1	16 89	56
27½ „ 1	14 63	57	57	3,924	82	47½ „ 1	16 21	57
27 „ 1	14 15	58	58	3,842	93	41½ „ 1	15 55	58
25½ „ 1	13 68	59	59	3,749	106	35½ „ 1	14 92	59
25 „ 1	13 21	**60**	**60**	3,643	122	29¾ „ 1	14 34	**60**

COMPARATIVE

Showing the Rate of Mortality or Number of Persons Living at every age in LONDON, NORTHAMPTON, and CARLISLE; with the DECREMENT of SURVIVORS to DEATHS in each Year; and the EXPECTATION of

LONDON MORTALITY. (SIMPSON, 1728–1737.)						NORTHAMPTON MOR-		
Age.	Number Living.	Decrement or Deaths in the next Year.	Intensity of Life or Proportion of Survivors to Deaths in each Year.	Expectation of Life.	Age.	Age.	Number Living.	Decrement or Deaths in the next Year.
				Years. Parts.				
61	962	50	19¼ to 1	11 44	61	61	1,679	70
62	912	49	18¾ „ 1	11 03	62	62	1,609	70
63	863	50	17¼ „ 1	10 64	63	63	1,539	69
64	813	50	16¾ „ 1	10 25	64	64	1,470	69
65	763	48	15¾ „ 1	9 89	**65**	**65**	1,401	69
66	715	48	14¾ „ 1	9 52	66	66	1,332	68
67	667	49	13⅔ „ 1	9 18	67	67	1,264	69
68	618	44	14 „ 1	8 86	68	68	1,195	69
69	574	44	13 „ 1	8 50	69	69	1,126	68
70	530	41	12⅔ „ 1	8 16	**70**	**70**	1,058	69
71	489	41	11⅞ „ 1	7 81	71	71	989	69
72	448	40	11½ „ 1	7 47	72	72	920	68
73	408	35	11⅔ „ 1	7 17	73	73	852	69
74	373	34	11 „ 1	6 79	74	74	783	69
75	339	34	10 „ 1	6 42	**75**	**75**	714	69
76	305	33	9½ „ 1	6 08	76	76	645	66
77	272	33	8½ „ 1	5 75	77	77	579	62
78	239	26	9¼ „ 1	5 47	78	78	517	59
79	213	43	5 „ 1	5 08	79	79	458	55
80	170	22	7¾ „ 1	5 24	**80**	**80**	403	55
81	148	21	7 „ 1	4 93	81	81	348	51
82	127	19	6½ „ 1	4 67	82	82	297	49
83	108	19	5¾ „ 1	4 42	83	83	248	47
84	89	11	8 „ 1	4 23	84	84	201	41
85	78	17	4½ „ 1	3 79	**85**	**85**	160	36
86	61	13	4⅔ „ 1	3 68	86	86	124	29
87	48	12	4 „ 1	3 52	87	87	95	24
88	36	7	5½ „ 1	3 52	88	88	71	18
89	29	7	4⅓ „ 1	3 33	89	89	53	14
90	22	4	5½ „ 1	3 22	**90**	**90**	39	10

Table

from Birth to 90, out of 10,000 Born, according to the Observations made or Deaths from Year to Year; the Intensity of Life or Proportion Life or number of Years a party of a given age may expect to live.

TALITY. (Price, 1735–1780.)			CARLISLE MORTALITY. (Mylne, 1779–1787.)					
Intensity of Life or Proportion of Survivors to Deaths in each Year.	Expectation of Life.	Age.	Age.	Number Living.	Decrement or Deaths in the next Year.	Intensity of Life or Proportion of Survivors to Deaths in each Year.	Expectation of Life.	Age.
	Years. Parts						Yrs. Parts	
24 to 1	12 75	61	61	3,521	126	28 to 1	13 82	61
23 „ 1	12 28	62	62	3,395	127	26¾ „ 1	13 31	62
22½ „ 1	11 81	63	63	3,268	125	26½ „ 1	12 81	63
21½ „ 1	11 35	64	64	3,143	125	25½ „ 1	12 30	64
20½ „ 1	10 88	**65**	**65**	3,018	124	24½ „ 1	11 79	**65**
19⅝ „ 1	10 42	66	66	2,894	123	23½ „ 1	11 27	66
18½ „ 1	9 96	67	67	2,771	123	22½ „ 1	10 75	67
17½ „ 1	9 50	68	68	2,648	123	21½ „ 1	10 23	68
16½ „ 1	9 05	69	69	2,525	124	20⅝ „ 1	9 70	69
15½ „ 1	8 60	**70**	**70**	2,401	124	19⅜ „ 1	9 18	**70**
14½ „ 1	8 17	71	71	2,277	134	17 „ 1	8 65	71
13½ „ 1	7 74	72	72	2,143	146	14⅔ „ 1	8 16	72
12½ „ 1	7 33	73	73	1,997	156	12¾ „ 1	7 72	73
11½ „ 1	6 92	74	74	1,841	166	11½ „ 1	7 33	74
10½ „ 1	6 54	**75**	**75**	1,675	160	10½ „ 1	7 01	**75**
9¾ „ 1	6 18	76	76	1,515	156	9¾ „ 1	6 69	76
9½ „ 1	5 83	77	77	1,359	146	9½ „ 1	6 40	77
8¾ „ 1	5 48	78	78	1,213	132	9¼ „ 1	6 12	78
8½ „ 1	5 11	79	79	1,081	128	8½ „ 1	5 80	79
7½ „ 1	4 75	**80**	**80**	953	116	8¼ „ 1	5 51	**80**
6⅞ „ 1	4 41	81	81	837	112	7¼ „ 1	5 21	81
6 „ 1	4 09	82	82	725	102	7⅛ „ 1	4 93	82
5¼ „ 1	3 80	83	83	623	94	6⅝ „ 1	4 65	83
4⅞ „ 1	3 58	84	84	529	84	6⅓ „ 1	4 39	84
4½ „ 1	3 37	**85**	**85**	445	78	5⅔ „ 1	4 12	**85**
4¼ „ 1	3 19	86	86	367	71	5⅛ „ 1	3 90	86
4 „ 1	3 01	87	87	296	64	4⅝ „ 1	3 71	87
4 „ 1	2 86	88	88	232	51	4½ „ 1	3 59	88
3¾ „ 1	2 66	89	89	181	39	4⅝ „ 1	3 47	89
3⅝ „ 1	2 41	**90**	**90**	142	37	3⅞ „ 1	3 28	**90**

Showing the Expectation of Life, or the Period a Party of a given Age may expect to Live, according to the following Tables of Mortality, deduced from Observations made in England.*

Completed Age.	Carlisle.	Northampton.	Equitable Experience. 1834. Table A.	Equitable Experience. 1834. Table B.	Amicable Experience. 1841.	Experience, 17 Life Offices, 1843.	Government Annuitants. Males.	Government Annuitants. Females.	Completed Age.
	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	Years. Parts.	
0	38 72	25 18					50 16	55 51	0
1	44 68	32 74					50 13	55 59	1
5	51 25	40 84					48 93	54 23	5
10	48 82	39 78	48 32	43 73			45 57	51 05	10
13	46 51	37 83	46 35	41 71			43 31	48 70	13
15	45 00	36 51	45 03	40 36			41 76	47 19	15
17	43 57	35 20	43 70	39 01			40 29	45 86	17
20	41 46	33 43	41 67	37 05		41 49	38 39	43 99	20
23	39 31	31 88	39 55	35 33		39 39	36 87	42 09	23
25	37 86	30 85	38 12	34 25	37 80	37 98	35 90	40 81	25
27	36 41	29 82	36 69	33 16	36 14	36 56	34 86	39 52	27
30	34 34	28 27	34 53	31 53	33 68	34 43	33 17	37 57	30
33	32 36	26 72	32 36	29 84	31 28	32 30	31 40	35 61	33
35	31 00	25 68	30 93	28 67	29 72	30 87	30 17	34 31	35
37	29 64	24 61	29 50	27 47	28 19	29 44	28 91	33 04	37
40	27 61	23 08	27 39	25 65	25 94	27 28	27 02	31 12	40
43	25 71	21 54	25 29	23 80	23 77	25 12	25 08	29 14	43
45	24 46	20 52	23 87	22 55	22 36	23 69	23 75	27 81	45
47	23 17	19 51	22 47	21 29	20 99	22 27	22 38	26 44	47
49	21 81	18 49	21 06	20 02	19 65	20 87	20 98	25 06	49
50	21 11	17 99	20 36	19 37	18 99	20 18	20 30	24 35	50
51	20 39	17 50	19 66	18 73	18 34	19 50	19 62	23 65	51
53	18 97	16 54	18 30	17 49	17 07	18 16	18 31	22 22	53
55	17 58	15 58	16 99	16 28	15 83	16 86	17 15	20 79	55
57	16 21	14 63	15 70	15 15	14 62	15 59	16 02	19 38	57
59	14 92	13 68	14 49	14 05	13 45	14 37	14 93	18 00	59
60	14 34	13 21	13 91	13 53	12 88	13 77	14 39	17 32	60
61	13 82	12 75	13 35	13 02	12 32	13 18	13 84	16 64	61
63	12 81	11 81	12 23	12 04	11 25	12 05	12 72	15 30	63
65	11 79	10 88	11 13	11 07	10 26	10 97	11 63	14 00	65
67	10 75	9 96	10 10	10 12	9 35	9 96	10 61	12 76	67
70	9 18	8 60	8 70	8 70	8 11	8 54	9 22	10 99	70
73	7 72	7 33	7 40	7 32	7 01	7 26	7 96	9 41	73
75	7 01	6 54	6 61	6 43	6 34	6 48	7 12	8 46	75
77	6 40	5 83	5 86	5 60	5 72	5 76	6 23	7 58	77
80	5 51	4 75	4 75	4 51	4 88	4 78	4 94	6 50	80
83	4 65	3 80	3 79	3 65	4 14		3 82	5 57	83
85	4 12	3 37	3 39	3 23	3 70		3 12	4 84	85
87	3 71	3 01	3 03	2 82	3 28		2 53	4 03	87
90	3 28	2 41	2 56	2 19	2 70		1 95	2 83	90

* See Note (No. 2) Expectation of Life.

Showing the EXPECTATION OF LIFE, or the Period a Party of a given Age may expect to live, according to the following TABLES OF MORTALITY, deduced from Observations made on the CONTINENT.

Completed AGE.	SWEDEN. Males.	SWEDEN. Females.	SWEDEN. General Population.	FRANCE. General Population.	FRANCE. State Annuitants.	HOLLAND. State Annuitants.	BRESLAW.	BRANDENBURG.	Completed AGE.
	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	Years Parts	
0	33 19	35 70	34 42	28 76	34 89	34 47	27 45	30 68	**0**
1	41 96	44 00	42 96	36 35	45 67	41 77	33 43	37 60	1
5	45 62	48 00	46 80	43 40	48 35	44 45	41 20	42 94	5
10	43 95	46 26	45 07	40 80	46 92	42 71	40 40	42 14	**10**
13	42 00	44 26	43 11	38 74	45 08	40 90	38 68	40 05	13
15	40 56	42 77	41 64	37 40	43 66	39 55	37 40	38 64	15
17	39 10	41 30	40 18	36 11	42 25	38 19	36 11	37 22	17
20	36 96	39 15	38 03	34 26	40 29	36 31	34 15	35 07	**20**
23	34 94	37 01	35 96	32 48	38 43	34 41	32 22	33 10	23
25	33 64	35 58	34 59	31 33	37 21	33 28	30 88	31 76	25
27	32 33	34 18	33 23	30 20	36 02	32 36	29 64	30 55	27
30	30 33	32 17	31 23	28 52	34 18	30 93	27 81	28 70	**30**
33	28 40	30 27	29 30	26 84	32 26	29 49	26 05	26 83	33
35	27 09	29 03	28 03	25 72	30 95	28 36	24 92	25 56	35
37	25 77	27 69	26 70	24 59	29 62	27 22	23 83	24 41	37
40	23 75	25 63	24 66	22 89	27 54	25 50	22 19	22 65	**40**
43	21 89	23 78	22 80	21 18	25 42	23 62	20 57	20 86	43
45	20 71	22 57	21 61	20 05	24 02	22 34	19 56	19 65	45
47	19 69	21 28	20 37	18 91	22 61	21 13	18 54	18 43	47
49	18 31	19 93	19 08	17 79	21 21	19 99	17 53	17 18	49
50	17 72	19 26	18 46	17 23	20 51	19 41	17 07	16 55	**50**
51	17 18	18 62	17 87	16 67	19 83	18 87	16 61	15 96	51
53	16 09	17 39	16 70	15 58	18 45	17 82	15 71	14 78	53
55	14 99	16 16	15 54	14 51	17 15	16 73	14 77	13 68	55
57	13 87	14 90	14 36	13 46	15 92	15 66	13 78	12 68	57
59	12 79	13 67	13 20	12 45	14 70	14 62	12 80	11 73	59
60	12 25	13 08	12 63	11 95	14 15	14 17	12 30	11 28	**60**
61	11 72	12 54	12 10	11 47	13 59	13 58	11 81	10 84	61
63	10 74	11 51	11 09	10 53	12 52	12 54	10 83	9 98	63
65	9 78	10 49	10 10	9 63	11 43	11 56	9 86	9 15	65
67	8 84	9 47	9 12	8 77	10 37	10 59	8 89	8 38	67
70	7 60	7 92	7 72	7 58	8 79	9 15	7 45	7 39	**70**
73	6 53	6 63	6 53	6 51	7 29	7 74	6 25	6 52	73
75	5 89	6 03	5 91	5 86	6 44	6 82	5 51	6 17	75
77	5 26	5 43	5 29	5 29	5 71	6 02	4 84	5 76	77
80	4 27	4 46	4 28	4 60	4 73	5 06	4 08	5 06	**80**
83	3 45	3 59	3 57	4 19	3 86	4 09	3 19	4 55	83
85	3 16	3 40	3 23	4 16	3 33	3 38	2 37	4 19	85
87	2 88	3 23	2 92	4 28	2 72	2 84	1 62	3 61	87
90	2 02	2 55	2 05	3 86	1 77	2 47	0 50	2 50	**90**

DECIMAL TABLES.

As the DECIMAL proportions of a YEAR or of a POUND are constantly used in this book, these DECIMAL TABLES will at once show the value of the nearest period in Months and Weeks; or the nearest amount in Shillings and Pence corresponding to the Decimal whose value is sought.

YEAR DECIMAL TABLE,

Showing the equivalent Decimal to each Week and Month in the Year.

Decimals.	Portion of a Year.		Decimals.	Portion of a Year.		Decimals.	Portion of a Year.	
	Months.	Weeks.		Months.	Weeks.		Months.	Weeks.
·019	0	1	·352	4	1	·686	8	1
·038	0	2	·372	4	2	·705	8	2
·058	0	3	·391	4	3	·725	8	3
·077	0	4	·410	4	4	·745	8	4
·083	1	0	·416	5	0	·750	9	0
·102	1	1	·435	5	1	·769	9	1
·122	1	2	·455	5	2	·788	9	2
·141	1	3	·474	5	3	·808	9	3
·160	1	4	·483	5	4	·827	9	4
·166	2	0	·500	6	0	·833	10	0
·185	2	1	·519	6	1	·852	10	1
·205	2	2	·538	6	2	·872	10	2
·224	2	3	·558	6	3	·891	10	3
·243	2	4	·577	6	4	·910	10	4
·250	3	0	·583	7	0	·916	11	0
·269	3	1	·602	7	1	·936	11	1
·296	3	2	·622	7	2	·955	11	2
·308	3	3	·641	7	3	·974	11	3
·327	3	4	·660	7	4	·993	11	4
·333	4	0	·666	8	0	1·000	12	0

TABLE OF FRACTIONS WITH EQUIVALENT DECIMAL.

Fractions.	Decimals.	Fractions.	Decimals.	Fractions.	Decimals.
$\frac{1}{16}$	·062	$\frac{3}{8}$	·375	$\frac{11}{16}$	·687
$\frac{1}{12}$	·083	$\frac{2}{5}$	·400	$\frac{7}{10}$	·700
$\frac{1}{10}$	·100	$\frac{5}{12}$	·416	$\frac{3}{4}$	·750
$\frac{1}{8}$	·125	$\frac{7}{16}$	·437	$\frac{4}{5}$	·800
$\frac{1}{6}$	·166	$\frac{1}{2}$	·500	$\frac{13}{16}$	·812
$\frac{3}{16}$	·157	$\frac{9}{16}$	·562	$\frac{5}{6}$	·833
$\frac{1}{5}$	·200	$\frac{7}{12}$	·583	$\frac{7}{8}$	·875
$\frac{1}{4}$	·250	$\frac{3}{5}$	·600	$\frac{9}{10}$	·900
$\frac{3}{10}$	·300	$\frac{5}{8}$	·625	$\frac{11}{12}$	·916
$\frac{5}{16}$	·312	$\frac{2}{3}$	·666	$\frac{15}{16}$	·937
$\frac{1}{3}$	·333				

POUND DECIMAL TABLE,

Showing the DECIMAL equivalent to each PENNY in the POUND STERLING.

Decimal.	Portion of a Pound.		Decimal.	Portion of a Pound.		Decimal.	Portion of a Pound.		Decimal.	Portion of a Pound.		Decimal.	Portion of a Pound.	
	s.	d.		s.	d.		s.	d.		s.	d.		s.	d.
·004	0	1	·204	4	1	·404	8	1	·604	12	1	·804	16	1
·008	0	2	·208	4	2	·408	8	2	·608	12	2	·808	16	2
·012	0	3	·212	4	3	·412	8	3	·612	12	3	·812	16	3
·017	0	4	·217	4	4	·417	8	4	·617	12	4	·817	16	4
·021	0	5	·221	4	5	·421	8	5	·621	12	5	·821	16	5
·025	0	6	·225	4	6	·425	8	6	·625	12	6	·825	16	6
·029	0	7	·229	4	7	·429	8	7	·629	12	7	·829	16	7
·033	0	8	·233	4	8	·433	8	8	·633	12	8	·833	16	8
·037	0	9	·237	4	9	·437	8	9	·637	12	9	·837	16	9
·042	0	10	·242	4	10	·442	8	10	·642	12	10	·842	16	10
·046	0	11	·246	4	11	·446	8	11	·646	12	11	·846	16	11
·050	1	0	·250	5	0	·450	9	0	·650	13	0	·850	17	0
·054	1	1	·254	5	1	·454	9	1	·654	13	1	·854	17	1
·058	1	2	·258	5	2	·458	9	2	·658	13	2	·858	17	2
·062	1	3	·262	5	3	·462	9	3	·662	13	3	·862	17	3
·067	1	4	·267	5	4	·467	9	4	·667	13	4	·867	17	4
·071	1	5	·271	5	5	·471	9	5	·671	13	5	·871	17	5
·075	1	6	·275	5	6	·475	9	6	·675	13	6	·875	17	6
·079	1	7	·279	5	7	·479	9	7	·679	13	7	·879	17	7
·083	1	8	·283	5	8	·483	9	8	·683	13	8	·883	17	8
·087	1	9	·287	5	9	·487	9	9	·687	13	9	·887	17	9
·092	1	10	·292	5	10	·492	9	10	·692	13	10	·892	17	10
·096	1	11	·296	5	11	·496	9	11	·696	13	11	·896	17	11
·100	2	0	·300	6	0	·500	10	0	·700	14	0	·900	18	0
·104	2	1	·304	6	1	·504	10	1	·704	14	1	·904	18	1
·108	2	2	·308	6	2	·508	10	2	·708	14	2	·908	18	2
·112	2	3	·312	6	3	·512	10	3	·712	14	3	·912	18	3
·117	2	4	·317	6	4	·517	10	4	·717	14	4	·917	18	4
·121	2	5	·321	6	5	·521	10	5	·721	14	5	·921	18	5
·125	2	6	·325	6	6	·525	10	6	·725	14	6	·925	18	6
·129	2	7	·329	6	7	·529	10	7	·729	14	7	·929	18	7
·133	2	8	·333	6	8	·533	10	8	·733	14	8	·933	18	8
·137	2	9	·337	6	9	·537	10	9	·737	14	9	·937	18	9
·142	2	10	·342	6	10	·542	10	10	·742	14	10	·942	18	10
·146	2	11	·346	6	11	·546	10	11	·746	14	11	·946	18	11
·150	3	0	·350	7	0	·550	11	0	·750	15	0	·950	19	0
·154	3	1	·354	7	1	·554	11	1	·754	15	1	·954	19	1
·158	3	2	·358	7	2	·558	11	2	·758	15	2	·958	19	2
·162	3	3	·362	7	3	·562	11	3	·762	15	3	·962	19	3
·167	3	4	·367	7	4	·567	11	4	·767	15	4	·967	19	4
·171	3	5	·371	7	5	·571	11	5	·771	15	5	·971	19	5
·175	3	6	·375	7	6	·575	11	6	·775	15	6	·975	19	6
·179	3	7	·379	7	7	·579	11	7	·779	15	7	·979	19	7
·183	3	8	·383	7	8	·583	11	8	·783	15	8	·983	19	8
·187	3	9	·387	7	9	·587	11	9	·787	15	9	·987	19	9
·192	3	10	·392	7	10	·592	11	10	·792	15	10	·992	19	10
·196	3	11	·396	7	11	·596	11	11	·796	15	11	·996	19	11
·200	4	0	·400	8	0	·600	12	0	·800	16	0	1·000	20	0

N. B. When three places of decimals are used, the Pound is considered as divided into 1000 par*s; and when only two places are used, then the Pound is considered as divided into 100 parts.

DECIMAL COINAGE.

Although the recommendations of the Select Committee of the House of Commons on DECIMAL COINAGE, dated 1st August, 1853, have not as yet been carried out, it is probable that the change will ultimately take place. Assuming, therefore, that the Pound Sterling will be divided into Florins, Cents, and Mils, by the aid of the following Tables any number of Pounds or Yards, &c., at a given price in pence and parts may be readily converted into the true amount in a DECIMAL CURRENCY.

Mils.	Cents.	Florins.	
1			
10 =	1		
100 =	10 =	1	
1000 =	100 =	10 =	1 Pound.

1 Pound = 1000 Mils.
$\frac{1}{10}$ Pound = 1 Florin = 100 „
$\frac{1}{100}$ „ = 1 Cent = 10 „
$\frac{1}{1000}$ „ = 1 Mil.

TABLE of the ten first MULTIPLES of the following DECIMAL Values of a POUND, viz.: One Penny; one Farthing; $\frac{1}{8}$ of a Penny; and $\frac{1}{16}$ of a Penny.

Multiple.	ONE PENNY.	Multiple.	ONE FARTHING.	Multiple.	$\frac{1}{8}$ of a PENNY.	Multiple.	$\frac{1}{16}$ of a PENNY.
1	·004 166	1	·001 041 6	1	·000 520 83	1	·000 260 416
2	·008 333	2	·002 083 3	2	·001 041 66	2	·000 520 833
3	·012 500	3	·003 125 0	3	·001 562 50	3	·000 781 250
4	·016 666	4	·004 166 6	4	·002 083 33	4	·001 041 666
5	·020 833	5	·005 208 3	5	·002 604 16	5	·001 302 083
6	·025 000	6	·006 250 0	6	·003 125 00	6	·001 562 500
7	·029 166	7	·007 291 6	7	·003 645 83	7	·001 822 916
8	·033 333	8	·008 333 3	8	·004 166 66	8	·002 083 333
9	·037 500	9	·009 375 0	9	·004 687 50	9	·002 343 750
10	·041 666	10	·010 416 6	10	·005 208 33	10	·002 604 166

N.B.—The last figures in the *above Decimal Values* are *recurrent*.

E.G. 1. What is the amount in a Decimal Currency of 957 yards Cotton at $6\frac{3}{16}d.$ per yard?

$6\frac{3}{16}d. = \frac{99}{16}$. 957 × 99 = 94743 Sixteenths.

By Table	3	Sixteenths =	·000 781
	40	„ =	·010 416
	700	„ =	·182 291
	4000	„ =	1·041 666
	90000	„ =	23·437 500
	94743		£ 24·672 654

or 24 Pounds 6 Florins 7 Cents 2 Mils $\frac{654}{1000}$.

E.G. 2. What is the amount in a Decimal Currency of 957 pounds of Cotton at $4\frac{3}{8}d.$ per lb.?

$4\frac{3}{8}d. = \frac{35}{8}$. 957 × 35 = 33495 Eighths.

By Table	5	Eighths =	·002 60416
	90	„ =	·046 87500
	400	„ =	·208 33333
	3000	„ =	1·562 50000
	30000	„ =	15·625 00000
	33495		£ 17·445 31250

or 17 Pounds 4 Florins 4 Cents 5 Mils $\frac{313}{1000}$.

E.G. 3. What is the amount in a Decimal Currency of 957 pounds of Sugar at $5\frac{1}{4}$ per lb.?

$5\frac{1}{4} = \frac{21}{4}$. 957 × 21 = 20097 Farthings.

By Table	7	Farthings =	·007 2916
	90	„ =	·093 7500
	20000	„ =	20·833 3333
	20097		£ 20·934 3750

or 20 Pounds 9 Florins 3 Cents 4 Mils $\frac{375}{1000}$.

MISCELLANEOUS TABLES.

INTEREST TABLE AT 3 PER CENT.

Amount.			1 Day.		1 Week.		1 Month.			3 Months.			6 Months.			1 Year.		
£.	s.	d.	s.	d.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
–	5	0	–	–	–	–	–	–	0	–	–	0¼	–	–	0¾	–	–	1¾
–	10	0	–	–	–	–	–	–	0¼	–	–	0¾	–	–	1¾	–	–	3½
–	15	0	–	–	–	–	–	–	0¼	–	–	1¼	–	–	2½	–	–	5¼
1	–	–	–	–	–	–	–	–	0½	–	–	1¾	–	–	3½	–	–	7
2	–	–	–	–	–	0¼	–	–	1	–	–	3½	–	–	7	–	1	2¼
3	–	–	–	–	–	0¼	–	–	1¾	–	–	5¼	–	–	10¾	–	1	9½
4	–	–	–	–	–	0½	–	–	2¼	–	–	7	–	1	2¼	–	2	4¾
5	–	–	–	–	–	0½	–	–	3	–	–	9	–	1	6	–	3	0
6	–	–	–	–	–	0¾	–	–	3½	–	–	10¾	–	1	9½	–	3	7
7	–	–	–	–	–	0¾	–	–	4	–	1	0½	–	2	1	–	4	2¼
8	–	–	–	–	–	1	–	–	4¾	–	1	2¼	–	2	4¾	–	4	9½
9	–	–	–	–	–	1	–	–	5¼	–	1	4	–	2	8¼	–	5	4¾
10	–	–	–	–	–	1¼	–	–	6	–	1	6	–	3	0	–	6	0
11	–	–	–	–	–	1½	–	–	6½	–	1	7¾	–	3	3½	–	6	7
12	–	–	–	–	–	1½	–	–	7	–	1	9½	–	3	7	–	7	2¼
13	–	–	–	0¼	–	1¾	–	–	7¾	–	1	11¼	–	3	10¾	–	7	9½
14	–	–	–	0¼	–	1¾	–	–	8¼	–	2	1	–	4	2¼	–	8	4¾
15	–	–	–	0¼	–	2	–	–	9	–	2	3	–	4	6	–	9	0
16	–	–	–	0¼	–	2	–	–	9½	–	2	4¾	–	4	9½	–	9	7
17	–	–	–	0¼	–	2¼	–	–	10	–	2	6½	–	5	1	–	10	2¼
18	–	–	–	0¼	–	2¼	–	–	10¾	–	2	8¼	–	5	4¾	–	10	9½
19	–	–	–	0¼	–	2½	–	–	11¼	–	2	10	–	5	8¼	–	11	4¾
20	–	–	–	0¼	–	2½	–	1	0	–	3	0	–	6	0	–	12	0
25	–	–	–	0¼	–	3¼	–	1	3	–	3	9	–	7	6	–	15	0
30	–	–	–	0½	–	4	–	1	6	–	4	6	–	9	0	–	18	0
35	–	–	–	0½	–	4¾	–	1	9	–	5	3	–	10	6	1	1	0
40	–	–	–	0¾	–	5½	–	2	0	–	6	0	–	12	0	1	4	0
45	–	–	–	0¾	–	6	–	2	3	–	6	9	–	13	6	1	7	0
50	–	–	–	0¾	–	6¾	–	2	6	–	7	6	–	15	0	1	10	0
55	–	–	–	1	–	7½	–	2	9	–	8	3	–	16	6	1	13	0
60	–	–	–	1	–	8¼	–	3	0	–	9	0	–	18	0	1	16	0
65	–	–	–	1¼	–	8¾	–	3	3	–	9	9	–	19	6	1	19	0
70	–	–	–	1¼	–	9½	–	3	6	–	10	6	1	1	0	2	2	0
75	–	–	–	1¼	–	10¼	–	3	9	–	11	3	1	2	6	2	5	0
80	–	–	–	1½	–	11	–	4	0	–	12	0	1	4	0	2	8	0
85	–	–	–	1½	–	11½	–	4	3	–	12	9	1	5	6	2	11	0
90	–	–	–	1¾	1	0¼	–	4	6	–	13	6	1	7	0	2	14	0
95	–	–	–	1¾	1	1	–	4	9	–	14	3	1	8	6	2	17	0
100	–	–	–	1¾	1	1¾	–	5	0	–	15	0	1	10	0	3	0	0
200	–	–	–	3¾	2	3½	–	10	0	1	10	0	3	0	0	6	0	0
300	–	–	–	5¾	3	5½	–	15	0	2	5	0	4	10	0	9	0	0
400	–	–	–	7¾	4	7	1	0	0	3	0	0	6	0	0	12	0	0
500	–	–	–	9¾	5	9	1	5	0	3	15	0	7	10	0	15	0	0
600	–	–	–	11¾	6	10¾	1	10	0	4	10	0	9	0	0	18	0	0
700	–	–	1	1¾	8	0¾	1	15	0	5	5	0	10	10	0	21	0	0
800	–	–	1	3¾	9	2¾	2	0	0	6	0	0	12	0	0	24	0	0
900	–	–	1	5¾	10	4½	2	5	0	6	15	0	13	10	0	27	0	0
1000	–	–	1	7½	11	6	2	10	0	7	10	0	15	0	0	30	0	0

INTEREST TABLE AT 4 PER CENT.

AMOUNT.	1 DAY.	1 WEEK.	1 MONTH.	3 MONTHS.	6 MONTHS.	1 YEAR.
£. s. d.	s. d.	s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
– 5 0	– –	– –	– – –	– – ½	– – 1	– – 2½
– 10 0	– –	– –	– – ¼	– – 1	– – 2½	– – 4¾
– 15 0	– –	– –	– – ½	– – 1¾	– – 3½	– – 7
1 – –	– –	– –	– – ¾	– – 2½	– – 4¾	– – 9½
2 – –	– –	– ¼	– – 1½	– – 4¾	– – 9½	– 1 7
3 – –	– –	– ½	– – 2¼	– – 7	– 1 2½	– 2 4¾
4 – –	– –	– ½	– – 3	– – 9½	– 1 7	– 3 2½
5 – –	– –	– ¾	– – 4	– 1 0	– 2 0	– 4 0
6 – –	– –	– 1	– – 4¾	– 1 2½	– 2 4¾	– 4 9½
7 – –	– –	– 1¼	– – 5½	– 1 4¾	– 2 9½	– 5 7
8 – –	– –	– 1½	– – 6¼	– 1 7	– 3 2½	– 6 4¾
9 – –	– –	– 1½	– – 7	– 1 9½	– 3 7	– 7 2½
10 – –	– ¼	– 1¾	– – 8	– 2 0	– 4 0	– 8 0
11 – –	– ¼	– 2	– – 8¾	– 2 2½	– 4 4¾	– 8 9½
12 – –	– ¼	– 2	– – 9½	– 2 4¾	– 4 9½	– 9 7
13 – –	– ¼	– 2¼	– – 10¼	– 2 7	– 5 2½	– 10 4¾
14 – –	– ¼	– 2½	– – 11	– 2 9½	– 5 7	– 11 2½
15 – –	– ¼	– 2¾	– 1 0	– 3 0	– 6 0	– 12 0
16 – –	– ¼	– 2¾	– 1 0¾	– 3 2½	– 6 4¾	– 12 9½
17 – –	– ¼	– 3	– 1 1½	– 3 4¾	– 6 9½	– 13 7
18 – –	– ¼	– 3¼	– 1 2¼	– 3 7	– 7 2½	– 14 4¾
19 – –	– ¼	– 3½	– 1 3	– 3 9½	– 7 7	– 15 2½
20 – –	– ½	– 3½	– 1 4	– 4 0	– 8 0	– 16 0
25 – –	– ½	– 4½	– 1 8	– 5 0	– 10 0	1 0 0
30 – –	– ¾	– 5½	– 2 0	– 6 0	– 12 0	1 4 0
35 – –	– ¾	– 6½	– 2 4	– 7 0	– 14 0	1 8 0
40 – –	– 1	– 7½	– 2 8	– 8 0	– 16 0	1 12 0
45 – –	– 1	– 8¼	– 3 0	– 9 0	– 18 0	1 16 0
50 – –	– 1¼	– 9	– 3 4	– 10 0	1 0 0	2 0 0
55 – –	– 1¼	– 10	– 3 8	– 11 0	1 2 0	2 4 0
60 – –	– 1½	– 11	– 4 0	– 12 0	1 4 0	2 8 0
65 – –	– 1½	– 11¾	– 4 4	– 13 0	1 6 0	2 12 0
70 – –	– 1¾	1 0¾	– 4 8	– 14 0	1 8 0	2 16 0
75 – –	– 1¾	1 1¾	– 5 0	– 15 0	1 10 0	3 0 0
80 – –	– 2	1 2½	– 5 4	– 16 0	1 12 0	3 4 0
85 – –	– 2	1 3½	– 5 8	– 17 0	1 14 0	3 8 0
90 – –	– 2¼	1 4½	– 6 0	– 18 0	1 16 0	3 12 0
95 – –	– 2¼	1 5½	– 6 4	– 19 0	1 18 0	3 16 0
100 – –	– 2½	1 6½	– 6 8	1 0 0	2 0 0	4 0 0
200 – –	– 5¼	3 0¾	– 13 4	2 0 0	4 0 0	8 0 0
300 – –	– 7¾	4 7	1 0 0	3 0 0	6 0 0	12 0 0
400 – –	– 10½	6 1½	1 6 8	4 0 0	8 0 0	16 0 0
500 – –	1 1	7 8	1 13 4	5 0 0	10 0 0	20 0 0
600 – –	1 3¾	9 2½	2 0 0	6 0 0	12 0 0	24 0 0
700 – –	1 6¼	10 8¾	2 6 8	7 0 0	14 0 0	28 0 0
800 – –	1 9	12 3½	2 13 4	8 0 0	16 0 0	32 0 0
900 – –	1 11½	13 9½	3 0 0	9 0 0	18 0 0	36 0 0
1000 – –	2 2¼	15 4	3 6 8	10 0 0	20 0 0	40 0 0

INTEREST TABLE AT 5 PER CENT.

Amount.	1 Day.	1 Week.	1 Month.	3 Months.	6 Months.	1 Year.
£. s. d.	s. d.	s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
– 5 0	– –	– –	– – ¼	– – ¾	– – 1½	– – 3
– 10 0	– –	– –	– – ½	– – 1½	– – 3	– – 6
– 15 0	– –	– –	– – ¾	– – 2¼	– – 4½	– – 9
1 – –	– –	– –	– – 1	– – 3	– – 6	– 1 0
2 – –	– –	– ¼	– – 2	– – 6	– 1 0	– 2 0
3 – –	– –	– ½	– – 3	– – 9	– 1 6	– 3 0
4 – –	– –	– ¾	– – 4	– 1 0	– 2 0	– 4 0
5 – –	– –	– 1	– – 5	– 1 3	– 2 6	– 5 0
6 – –	– –	– 1¼	– – 6	– 1 6	– 3 0	– 6 0
7 – –	– –	– 1½	– – 7	– 1 9	– 3 6	– 7 0
8 – –	– ¼	– 1¾	– – 8	– 2 0	– 4 0	– 8 0
9 – –	– ¼	– 2	– – 9	– 2 3	– 4 6	– 9 0
10 – –	– ¼	– 2¼	– – 10	– 2 6	– 5 0	– 10 0
11 – –	– ¼	– 2½	– – 11	– 2 9	– 5 6	– 11 0
12 – –	– ¼	– 2¾	– 1 0	– 3 0	– 6 0	– 12 0
13 – –	– ¼	– 2¾	– 1 1	– 3 3	– 6 6	– 13 0
14 – –	– ¼	– 3	– 1 2	– 3 6	– 7 0	– 14 0
15 – –	– ¼	– 3¼	– 1 3	– 3 9	– 7 6	– 15 0
16 – –	– ½	– 3½	– 1 4	– 4 0	– 8 0	– 16 0
17 – –	– ½	– 3¾	– 1 5	– 4 3	– 8 6	– 17 0
18 – –	– ½	– 4	– 1 6	– 4 6	– 9 0	– 18 0
19 – –	– ½	– 4¼	– 1 7	– 4 9	– 9 6	– 19 0
20 – –	– ½	– 4½	– 1 8	– 5 0	– 10 0	1 0 0
25 – –	– ¾	– 5¾	– 2 1	– 6 3	– 12 6	1 5 0
30 – –	– ¾	– 6¾	– 2 6	– 7 6	– 15 0	1 10 0
35 – –	– 1	– 8	– 2 11	– 8 9	– 17 6	1 15 0
40 – –	– 1¼	– 9	– 3 4	– 10 0	1 0 0	2 0 0
45 – –	– 1½	– 10¼	– 3 9	– 11 3	1 2 6	2 5 0
50 – –	– 1½	– 11½	– 4 2	– 12 6	1 5 0	2 10 0
55 – –	– 1¾	1 0½	– 4 7	– 13 9	1 7 6	2 15 0
60 – –	– 1¾	1 1¾	– 5 0	– 15 0	1 10 0	3 0 0
65 – –	– 2	1 2¾	– 5 5	– 16 3	1 12 6	3 5 0
70 – –	– 2¼	1 4	– 5 10	– 17 6	1 15 0	3 10 0
75 – –	– 2½	1 5½	– 6 3	– 18 9	1 17 6	3 15 0
80 – –	– 2½	1 6½	– 6 8	1 0 0	2 0 0	4 0 0
85 – –	– 2¾	1 7½	– 7 1	1 1 3	2 2 6	4 5 0
90 – –	– 2¾	1 8½	– 7 6	1 2 6	2 5 0	4 10 0
95 – –	– 3	1 9¾	– 7 11	1 3 9	2 7 6	4 15 0
100 – –	– 3¼	1 11	– 8 4	1 5 0	2 10 0	5 0 0
200 – –	– 6½	3 10	– 16 8	2 10 0	5 0 0	10 0 0
300 – –	– 9¾	5 9	1 5 0	3 15 0	7 10 0	15 0 0
400 – –	1 1	7 8	1 13 4	5 0 0	10 0 0	20 0 0
500 – –	1 4½	9 7	2 1 8	6 5 0	12 10 0	25 0 0
600 – –	1 7½	11 6	2 10 0	7 10 0	15 0 0	30 0 0
700 – –	1 11	13 5	2 18 4	8 15 0	17 10 0	35 0 0
800 – –	2 2½	15 4	3 6 8	10 0 0	20 0 0	40 0 0
900 – –	2 5½	17 3	3 15 0	11 5 0	22 10 0	45 0 0
1000 – –	2 8¾	19 2	4 3 4	12 10 0	25 0 0	50 0 0

SAVINGS' BANKS INTEREST TABLE,

Showing the AMOUNT OF INTEREST at £2. 18*s*. 4*d*. ℘ Cent., or 7*d*. in the POUND, on SUMS deposited from £1 to £200.

AMOUNT.	1 MONTH'S INTEREST.	2 MONTHS' INTEREST.	3 MONTHS' INTEREST.	6 MONTHS' INTEREST.	9 MONTHS' INTEREST.	12 MONTHS' INTEREST.
£.	*s. d.*	*s. d.*	£. *s. d.*	£. *s. d.*	£. *s. d.*	£. *s. d.*
1	– 0½	– 1	– – 1¾	– – 3½	– – 5¼	– – 7
2	– 1	– 2¼	– – 3½	– – 7	– – 10½	– 1 2
3	– 1¾	– 3½	– – 5¼	– – 10½	– 1 3¾	– 1 9
4	– 2¼	– 4½	– – 7	– 1 2	– 1 9	– 2 4
5	– 2¾	– 5¾	– – 8¾	– 1 5½	– 2 2¼	– 2 11
6	– 3½	– 7	– – 10½	– 1 9	– 2 7½	– 3 6
7	– 4	– 8	– 1 0¼	– 2 0½	– 3 0¾	– 4 1
8	– 4½	– 9¼	– 1 2	– 2 4	– 3 6	– 4 8
9	– 5¼	– 10½	– 1 3¾	– 2 7½	– 3 11¼	– 5 3
10	– 5¾	– 11½	– 1 5½	– 2 11	– 4 4½	– 5 10
11	– 6¼	1 0¾	– 1 7¼	– 3 2½	– 4 9¾	– 6 5
12	– 7	1 2	– 1 9	– 3 6	– 5 3	– 7 0
13	– 7½	1 3	– 1 10¾	– 3 9½	– 5 8¼	– 7 7
14	– 8	1 4¼	– 2 0½	– 4 1	– 6 1½	– 8 2
15	– 8¾	1 5½	– 2 2¼	– 4 4½	– 6 6¾	– 8 9
16	– 9¼	1 6½	– 2 4	– 4 8	– 7 0	– 9 4
17	– 9¾	1 7¾	– 2 5¾	– 4 11½	– 7 5¼	– 9 11
18	– 10½	1 9	– 2 7½	– 5 3	– 7 10½	– 10 6
19	– 11	1 10	– 2 9¼	– 5 6½	– 8 3¾	– 11 1
20	– 11½	1 11¼	– 2 11	– 5 10	– 8 9	– 11 8
21	1 0¼	2 0½	– 3 0¾	– 6 1½	– 9 2¼	– 12 3
22	1 0¾	2 1½	– 3 2½	– 6 5	– 9 7½	– 12 10
23	1 1¼	2 2¾	– 3 4¼	– 6 8½	– 10 0¾	– 13 5
24	1 2	2 4	– 3 6	– 7 0	– 10 6	– 14 0
25	1 2½	2 5	– 3 7¾	– 7 3½	– 10 11¼	– 14 7
26	1 3	2 6¼	– 3 9½	– 7 7	– 11 4½	– 15 2
27	1 3¾	2 7½	– 3 11¼	– 7 10½	– 11 9¾	– 15 9
28	1 4¼	2 8½	– 4 1	– 8 2	– 12 3	– 16 4
29	1 4¾	2 9¾	– 4 2¾	– 8 5½	– 12 8¼	– 16 11
30	1 5½	2 11	– 4 4½	– 8 9	– 13 1½	– 17 6
40	1 11¼	3 10½	– 5 10	– 11 8	– 17 6	1 3 4
50	2 5	4 10¼	– 7 3½	– 14 7	1 1 10½	1 9 2
60	2 11	5 10	– 8 9	– 17 6	1 6 3	1 15 0
70	3 4¾	6 9½	– 10 2½	1 0 5	1 10 7½	2 0 10
80	3 10½	7 9¼	– 11 8	1 3 4	1 15 0	2 6 8
90	4 4½	8 9	– 13 1½	1 6 3	1 19 4½	2 12 6
100	4 10¼	9 8½	– 14 7	1 9 2	2 3 9	2 18 4
200	9 8½	19 5¼	1 9 2	2 18 4	4 7 6	5 16 8

TABLE V.

General Income and Property Tax Table at various rates in the Pound.

Income	Duty at 1¾d. in the £.	Duty at 2¼d. in the £.	Duty at 5d. in the £.	Duty at 6d. in the £.	Duty at 7d. in the £.	Duty at 11½d. in the £.	Duty at 1s. 4d. in the £.
£.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1	0 0 1¾	0 0 2¼	0 0 5	0 0 6	0 0 7	0 0 11½	0 1 4
2	0 0 3½	0 0 4½	0 0 10	0 1 0	0 1 2	0 1 11	0 2 8
3	0 0 5¼	0 0 6¾	0 1 3	0 1 6	0 1 9	0 2 10½	0 4 0
4	0 0 7	0 0 9	0 1 8	0 2 0	0 2 4	0 3 10	0 5 4
5	0 0 8¾	0 0 11¼	0 2 1	0 2 6	0 2 11	0 4 9½	0 6 8
6	0 0 10½	0 1 1½	0 2 6	0 3 0	0 3 6	0 5 9	0 8 0
7	0 1 0¼	0 1 3¾	0 2 11	0 3 6	0 4 1	0 6 8½	0 9 4
8	0 1 2	0 1 6	0 3 4	0 4 0	0 4 8	0 7 8	0 10 8
9	0 1 3¾	0 1 8¼	0 3 9	0 4 6	0 5 3	0 8 7½	0 12 0
10	0 1 5½	0 1 10½	0 4 2	0 5 0	0 5 10	0 9 7	0 13 4
20	0 2 11	0 3 9	0 8 4	0 10 0	0 11 8	0 19 2	1 6 8
30	0 4 4½	0 5 7½	0 12 6	0 15 0	0 17 6	1 8 9	2 0 0
40	0 5 10	0 7 6	0 16 8	1 0 0	1 3 4	1 18 4	2 13 4
50	0 7 3½	0 9 4½	1 0 10	1 5 0	1 9 2	2 7 11	3 6 8
100	0 14 7	0 18 9	2 1 8	2 10 0	2 18 4	4 15 10	6 13 4
150	1 1 10½	1 8 1½	3 2 6	3 15 0	4 7 6	7 3 9	10 0 0
200	1 9 2	1 17 6	4 3 4	5 0 0	5 16 8	9 11 8	13 6 8
250	1 16 5½	2 6 10½	5 4 2	6 5 0	7 5 10	11 19 7	16 13 4
300	2 3 9	2 16 3	6 5 0	7 10 0	8 15 0	14 7 6	20 0 0
400	2 18 4	3 15 0	8 6 8	10 0 0	11 13 4	19 3 4	26 13 4
500	3 12 11	4 13 9	10 8 4	12 10 0	14 11 8	23 19 2	33 6 8
1000	7 5 10	9 7 6	20 16 8	25 0 0	29 3 4	47 18 4	66 13 4

TABLE VI.

Table for the Calculation of Wages or other Payments.

Pounds per Annum.	Wages in Sovereigns. ℔ Day.	℔ Week.	℔ Month.	℔ Quarter.	Guineas per Annum.	Wages in Guineas. ℔ Day.	℔ Week.	℔ Month.	℔ Quarter.
£.	s. d.	£. s. d.	£. s. d.	£. s. d.		s. d.	£. s. d.	£. s. d.	£. s. d.
1	0 ½	0 0 4½	0 1 8	0 5 0	1	0 ½	0 0 4¾	0 1 9	0 5 3
2	0 1¼	0 0 9	0 3 4	0 10 0	2	0 1¼	0 0 9½	0 3 6	0 10 6
3	0 1¾	0 1 1¾	0 5 0	0 15 0	3	0 2	0 1 2½	0 5 3	0 15 9
4	0 2½	0 1 6¼	0 6 8	1 0 0	4	0 2½	0 1 7¼	0 7 0	1 1 0
5	0 3¼	0 1 11	0 8 4	1 5 0	5	0 3¼	0 2 0	0 8 9	1 6 3
6	0 3¾	0 2 3½	0 10 0	1 10 0	6	0 4	0 2 5	0 10 6	1 11 6
7	0 4½	0 2 8¼	0 11 8	1 15 0	7	0 4¾	0 2 9¾	0 12 3	1 16 9
8	0 5¼	0 3 0¾	0 13 4	2 0 0	8	0 5½	0 3 2¾	0 14 0	2 2 0
9	0 5¾	0 3 5½	0 15 0	2 5 0	9	0 6	0 3 7½	0 15 9	2 7 3
10	0 6½	0 3 10	0 16 8	2 10 0	10	0 6¾	0 4 0¼	0 17 6	2 12 6
11	0 7	0 4 2½	0 18 4	2 15 0	11	0 7½	0 4 5¼	0 19 3	2 17 9
12	0 7¾	0 4 7¼	1 0 0	3 0 0	12	0 8¼	0 4 10	1 1 0	3 3 0
13	0 8½	0 5 0	1 1 8	3 5 0	13	0 8¾	0 5 3	1 2 9	3 8 3
14	0 9	0 5 4½	1 3 4	3 10 0	14	0 9½	0 5 7¾	1 4 6	3 13 6
15	0 9¾	0 5 9	1 5 0	3 15 0	15	0 10¼	0 6 0½	1 6 3	3 18 9
16	0 10½	0 6 1¾	1 6 8	4 0 0	16	0 11	0 6 5½	1 8 0	4 4 0
17	0 11	0 6 6¼	1 8 4	4 5 0	17	0 11½	0 6 10¼	1 9 9	4 9 3
18	0 11¾	0 6 11	1 10 0	4 10 0	18	1 0¼	0 7 3	1 11 6	4 14 6
19	1 0¼	0 7 3½	1 11 8	4 15 0	19	1 1	0 7 8	1 13 3	4 19 9
20	1 1	0 7 8¼	1 13 4	5 0 0	20	1 1¾	0 8 0¾	1 15 0	5 5 0
25	1 4¼	0 9 7¼	2 1 8	6 5 0	25	1 5¼	0 10 1	2 3 9	6 11 3
30	1 7½	0 11 6¼	2 10 0	7 10 0	30	1 8½	0 12 1¼	2 12 6	7 17 6
50	2 8¾	0 19 2½	4 3 4	12 10 0	50	2 10½	1 0 2¼	4 7 6	13 2 6
100	5 5¾	1 18 5½	8 6 8	25 0 0	100	5 9	2 0 4½	8 15 0	26 5 0

☞ Fractional parts not amounting to One Farthing are omitted.

EQUATION TABLE,

Showing the relative PRICES of different FUNDS, according to the ANNUAL DIVIDEND paid thereon, so as to produce the same RATE of INTEREST, contrasted with the Price of LAND.

Price of LAND in Years' Purchase.	PRICE OF STOCK yielding a Yearly DIVIDEND of									Annual Interest afforded.
	3 ℔ Ct.	3¼ ℔ Cent.	3½ ℔ Cent.	4 ℔ Cent.	5 ℔ Cent.	6 ℔ Cent.	7 ℔ Cent.	8 ℔ Cent.	10½ ℔ Cent.	£. s. d.
20	60	65	70	80	100	120	140	160	210	5 0 0
20⅓	61	66⅛	71	81⅓	101⅔	122	142	162⅔	213½	4 18 9
20⅔	62	67¼	72⅓	82⅔	103⅓	124	144⅔	165⅓	217	4 16 9
21	63	68¼	73½	84	105	126	147	168	220½	4 15 3
21⅓	64	69⅜	74⅔	85⅓	106⅔	128	149⅓	170⅔	224	4 13 9
21⅔	65	70½	76	86⅔	108⅓	130	152	173⅓	227½	4 12 3
22	66	71½	77	88	110	132	154	176	231	4 10 11
22⅓	67	72⅝	78	89⅓	111⅔	134	156	178⅔	234½	4 9 7
22⅔	68	73¾	79⅓	90⅔	113⅓	136	158⅔	181⅓	238	4 8 3
23	69	74¾	80½	92	115	138	161	184	241½	4 7 0
23⅓	70	75⅞	81⅔	93⅓	116⅔	140	163⅓	186⅔	245	4 5 9
23⅔	71	77	83	94⅔	118⅓	142	166	189⅓	248½	4 4 6
24	72	78	84	96	120	144	168	192	252	4 3 4
24⅓	73	79⅛	85	97⅓	121⅔	146	170	194⅔	255½	4 2 2
24⅔	74	80¼	86⅓	98⅔	123⅓	148	172⅔	197⅓	259	4 1 1
25	75	81¼	87½	100	125	150	175	200	262½	4 0 0
25⅓	76	82⅜	88⅔	101⅓	126⅔	152	177⅓	202⅔	266	3 18 11
25⅔	77	83½	90	102⅔	128⅓	154	180	205⅓	269½	3 17 11
26	78	84½	91	104	130	156	182	208	273	3 16 11
26⅓	79	85½	92	105⅓	131⅔	158	184	210⅔	276½	3 15 11
26⅔	80	86¾	93⅓	106⅔	133⅓	160	186⅔	213⅓	280	3 15 0
27	81	87¾	94½	108	135	162	189	216	283½	3 14 1
27⅓	82	88⅞	95⅔	109⅓	136⅔	164	191⅓	218⅔	287	3 13 2
27⅔	83	90	97	110⅔	138⅓	166	194	221⅓	290½	3 12 4
28	84	91	98	112	140	168	196	224	294	3 11 5
28⅓	85	92⅛	99	113⅓	141⅔	170	198	226⅔	297½	3 10 7
28⅔	86	93¼	100⅓	114⅔	143⅓	172	200⅔	229⅓	301	3 9 9
29	87	94¼	101½	116	145	174	203	232	304½	3 9 0
29⅓	88	95⅜	102⅔	117⅓	146⅔	176	205⅓	234⅔	308	3 8 2
29⅔	89	96½	104	118⅔	148⅓	178	208	237⅓	311½	3 7 5
30	90	97½	105	120	150	180	210	240	315	3 6 8
30⅓	91	98⅝	106	121⅓	151⅔	182	212	242⅔	318½	3 5 11
30⅔	92	99¾	107⅓	122⅔	153⅓	184	214⅔	245⅓	322	3 5 3
31	93	100¾	108½	124	155	186	217	248	325½	3 4 6
31⅓	94	101⅞	109⅔	125⅓	156⅔	188	219⅓	250⅔	329	3 3 10
31⅔	95	103	111	126⅔	158⅓	190	222	253⅓	332½	3 3 2
32	96	104	112	128	160	192	224	256	336	3 2 6
32⅓	97	105⅛	113	129⅓	161⅔	194	226	258⅔	339½	3 1 10
32⅔	98	106¼	114⅓	130⅔	163⅓	196	228⅔	261⅓	343	3 1 3
33	99	107¼	115½	132	165	198	231	264	346½	3 0 7
33⅓	100	108⅜	116⅔	133⅓	166⅔	200	233⅓	266⅔	350	3 0 0
33⅔	101	109½	118	134⅔	168⅓	202	236	269⅓	353½	2 19 4

☞ The above relative prices will be affected to a certain extent according to the periods when the Dividends become due.

TABLE VIII.

Average Price of 3 ₩ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1860.

Year.	Price of Consols.	Average Rate of Interest per Cent. £	s.	d.	Peace or War.	Chief Administrations.	Events, &c.	National Debt.
	£.						N.B. At Accession Geo. II. in 1727, Total Funded Debt	Mill. 52
1731	96	3	2	6	Peace	Sir Robert Walpole from 1721 to February 1742.	16 March. Treaty of Alliance of Vienna. Austria, England & Holland, for Guarantee of Pragmatic Sanction, &c. 22 July. Spain accedes.	
1732	98	3	1	2	„		Dividend on Bank Stock 5½ per cent.	
1733	100	3	0	0	„			
1734	92	3	5	2	„		22 May. Kouli-Khan defeats the Turks in Persia, who lost 60,000 men.	
1735	95	3	3	1	„			
1736	102	2	18	9	„		7 Sept. Capt. Porteous hanged by the mob in Edinburgh.	
1737	106	2	16	7	„		June. Highest price of Consols 107.	
1738	104	2	17	8	„		18 Nov. Peace of Vienna. Austria & France.—Pragmatic Sanction agreed to.	
1739	101	2	19	4	War		18 Sept. Peace of Belgrade. Austria & Turkey.—Nadir Shah invades India.—23 Oct. England War with Spain.—25 Dec. "Great Frost" till 8 Feb. 1740.	46½
1740	99	3	0	7	„		20 Oct. Maria Theresa becomes Empress, by virtue of Pragmatic Sanction; which gave rise to the War of Austrian Succession.	
1741	95	3	3	1	„			
1742	100	3	0	0	„	Wilmington.	28 June. Peace of Berlin: King of Prussia & Queen of Hungary.—18 Nov. Treaty: England with Prussia.	
1743	101	2	19	4	„	Right Hon. Henry Pelham, except 2 days of "The Short-lived Ministry," 10 Feb. 1746.	15 June. Battle of Dettingen.—24 June. Treaty with Russia for 15 years.—7 Aug. Peace of Abo. Russia & Sweden.	
1744	94	3	3	10	„		31 March. War with France.—Nov. Broad Bottom Administration formed under Pelham.	
1745	89	3	7	4	„		30 April. Battle of Fontenoy. Second Scots' Rebellion.—21 Sept. Battle of Prestonpans.	
1746	82	3	13	2	„		16 April. Battle of Culloden.—1 May. Bank discounts at 4. No change till 1822.	
1747	83	3	12	3	„		25 March. Dividend on Bank Stock 5 per cent.	
1748	86	3	9	9	Peace		30 April. Peace of Aix-la-Chapelle. France and Spain.	78
1749	98	3	1	2	„		Interest on ¾ of National Debt reduced to 3½.	
1750	100	3	0	0	„			
1751	100	3	0	0	„			
1752	104	2	17	8	„		3 Sept. New Style adopted in England.	
1753	104	2	17	8	„		25 March. Dividend on Bank Stock 4½ per cent.	
1754	103	2	18	3	„	Duke of Newcastle.		
1755	96	3	2	6	War		8 June. War began with France.—1 Nov. Lisbon destroyed by an earthquake.	
1756	89	3	7	4	„		9 June. Seven Years' War commenced.—June. Black Hole at Calcutta.	
1757	90	3	6	8	„	Duke of Newcastle & Right Hon. W. Pitt.	23 June. Battle of Plassey gained by Clive.—30 Sept. War between England and Austria.—Interest on great part of the National Debt reduced to 3 per cent.	
1758	92	3	5	2	„			
1759	83	3	12	3	„		Sept. Jesuits expelled from Portugal. Pombal in power.—13 Sept. Quebec. Death of Wolfe.	
1760	82	3	13	2	„		25 Oct. Accession George III.	
1761	79	3	15	11	„		15 Aug. Family Compact of branches of House of Bourbon, signed at Paris.	
1762	75	4	0	0	„	Bute.	23 Jan. War: England with Spain, on account of Family Compact.—5 May. Jesuits expelled from France.	
1763	89	3	7	4	Peace	Rt. Hon. Geo. Grenville.	10 Feb. Peace of Paris. Canada, Florida, &c. ceded.—15 Feb. Peace of Hubertsburg. End of Seven Years' War.	139
1764	84	3	11	5	„		29 Sept. Order of Jesuits suppressed in France. Div. on Bank Stock 5 per cent.	
1765	88	3	8	2	„	Rockingham.	22 Mar. American Stamp Act.	

, From 1731 to 1780, the Average Price of Consols is from an unpublished work by Griffith Davies, Esq.

Average Price of 3 ℘ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1860.

Year.	Price of Consols.	Average Rate of Interest per Cent.			Peace or War.	Chief Administrations.	Events, &c.	National Debt.
	£.	£.	s.	d.				Mill.
1766	89	3	7	4	Peace	Chatham.		
1767	89	3	7	4	,,	Duke of Grafton.	Jesuits expelled from Spain.—Otaheite discovered by Wallis.—29 *Sept.* Div. on Bank Stock 5½.	
1768	91	3	5	11	,,		Jesuits expelled from Naples.	
1769	88	3	8	2	,,			
1770	83	3	12	3	,,	Lord North from 10 Feb. 1770 to 19 March 1782.	New South Wales discovered by Capt. Cook.	
1771	86	3	9	9	,,		22 *Jan.* Treaty: England and Spain. Falkland Islands ceded.	
1772	88	3	8	2	,,		5 *Aug.* Treaty of Petersburg. Austria, Russia, and Prussia.—First Partition of Poland.	
1773	87	3	8	11	,,		16 *June.* Warren Hastings first Gov.-Gen. of India.—17 *Aug.* Clement XIV. suppresses the Jesuits.—*Nov.* Insurrection at Boston.	
1774	88	3	8	2	War		21 *July.* Peace: Russia and Turkey.—Freedom of Commerce and Navigation of Black Sea granted. War of American Independence.	
1775	89	3	7	4	,,		19 *April.* Hostilities at Lexington with North American Colonists.—17 *June.* Bunker's Hill.	
1776	84	3	11	5	,,		4 *July.* American Declaration of Independence.	
1777	78	3	16	11	,,		11 *Sept.* Battle of Brandywine.	
1778	64	4	13	8	,,		6 *Feb.* Alliance: France and America.—13 *Mar.* War: England and France. War of Bavarian Succession.—8 *April.* Death of Chatham.	
1779	61	4	18	4	,,		13 *July.* Spain joins the War against England.—*July.* Siege of Gibraltar began.	
1780	61	4	18	4	,,		War with Hyder Ali.—2 to 7 *June.* Riots in London.—21 *Dec.* War: England and Holland.	
1781	58	5	3	5	,,		In 1780 and 1781, First Convention of the Northern Powers for the Armed Neutrality.—29 *Sept.* Div. on Bank Stock 6 *per cent.*	
1782	58	5	3	5	,,		30 *Nov.* Peace of Paris.—England accepts the Independence of U. S. of America.	
1783	64	4	13	8	,,	Right Hon. William Pitt from 27 December 1783 to March 1801.	*Feb.* Siege of Gibraltar raised.—2 *Sept.* Peace with Holland.—3 *Sept.* Peace: England and America; also with France and Spain.	
1784	57	5	5	3	Peace		20 *June.* Treaty of Peace: England and Holland.	250
1785	60	5	0	0	,,		8 *Feb.* Warren Hastings resigns and returns to England.—8 *Nov.* Treaty of Fontainbleau—Austria and Holland.	
1786	74	4	1	0	,,		*Mar.* Mr. Pitt's plan for extinction of National Debt by a Sinking Fund.	
1787	74	4	1	0	,,		22 *Feb.* First Assembly of the Notables in Paris.	249¼
1788	75	4	0	0	,,		25 *Mar.* Div. on Bank Stock 7.—25 *Sept.* Second Assembly of the Notables in Paris convened.—12 *Oct.* George III. becomes deranged.	
1789	76⅜	3	18	6	,,		23 *April.* George III. to St. Paul's on recovery.—14 *July.* Destruction of Bastile.	
1790	75⅝	3	19	3	,,		19 *June.* Suppression of the Nobility, Monasteries, Religious Orders, &c. in France.	
1791	82¾	3	12	6	,,		14 *Sep.* Louis XVI. accepts the first Constitution.	
1792	84¾	3	10	9	,,		26 *June.* First Coalition against France.—King of Prussia's Manifesto.—10 *Aug.* Kingly authority abolished in France.—*Nov.* British Militia ordered out.	
1793	75¾	3	19	2	War		17 *Jan.* Louis XVI. executed.—1 *Feb.* France declares War.—*Mar.* Second Partition of Poland.—8 *April.* Congress of Antwerp.	244½
1794	67½	4	8	10	,,		17 *May.* Habeas Corpus Act suspended.—1 *June.* Lord Howe's Victory.—29 *Oct.* Trial of John Horne Tooke.	
1795	65¾	4	11	3	,,		25 *April.* Trial of Warren Hastings ended.—25 *Nov.* Third Partition of Poland.	267
1796	61⅞	4	16	11	,,		*Dec.* French Fleet at Bantry Bay.—6 *Dec.* 18 Millions subscribed in 16 hours to support War.	328¾
1797	52	5	15	4	,,		14 *Feb.* Victory off St. Vincent.—26, Bank Restriction.—6 *Mar.* Bank issue £1 Notes.—14 *April.* Mutiny at Nore.—1 *June.* Consols 47½.—17 *Oct.* Treaty of Campo Formio.—9 *Dec.* Congress of Radstadt.	373½

⁂ From 1730 to 1848, the Average Price of Consols is from Van Sommer's Tables.

AVERAGE PRICE of 3 ℔ Cent. CONSOLIDATED ANNUITIES, with AVERAGE RATE of INTEREST. 1731 to 1860.

YEAR.	PRICE of CONSOLS.	AVERAGE RATE of INTEREST per Cent.			PEACE or WAR.	CHIEF ADMINISTRATIONS.	EVENTS, &c.	NATIONAL DEBT.
	£.	£.	s.	d.				Mill.
1798	52⅝	5	14	0	War	Rt. Hon. Wm. Pitt.	23 *May.* Rebellion in Ireland.—1 *Aug.* Battle of the NILE.—22 *Aug.* French land in Ireland.—23 *Aug.* Lowest price of Consols 47¼ per cent.	402¾
1799	60¾	4	18	9	,,		3 *April.* Second General Coalition. Bonaparte in Egypt and Syria.—*Dec.* First Tax on Income, 5 per cent.	436⅔
1800	63⅝	4	14	3	,,		Great Scarcity of Provisions.—16 *Dec.* TREATY of ARMED NEUTRALITY at Petersburg.	451⅔
1801	62½	4	16	7	,,	Rt. Hon. H. Addington, 17 March 1801 to May 1804.	1 *Jan.* UNION with Ireland.—9 *Feb.* PEACE of LUNEVILLE.—21 *Mar.* ALEXANDRIA.—2 *April.* Danish Fleet taken.—1 *Oct.* Peace with France.	481½
1802	72½	4	2	9	Peace		27 *Mar.* PEACE of AMIENS.—25 *Oct.* Holkar defeats Scindia near Poona.	528¾
1803	61⅝	4	17	4	War		16 *Jan.* Despard's conspiracy.—14 *Mar.* War with France.—22 *May.* British subjects detained.—23 *Sept.* Battle of ASSAYE.	543¼
1804	56½	5	6	8	,,	Rt. Hon. W. Pitt.	20 *May.* Bonaparte declared Emperor.—12 *Dec.* War with Spain.	553⅔
1805	59½	5	0	9	,,		21 *Oct.* TRAFALGAR.—13 *Nov.* French enter Vienna.—2 *Dec.* AUSTERLITZ.—25 *Dec.* Peace: France and Austria. Income Tax 6¼ per cent.	577
1806	61½	4	17	6	,,	"All the Talents."	7 *April.* War with Prussia.—*July.* Income Tax raised to 10.—12 *July.* CONFEDERATION of the RHINE.—21 *Nov.* BERLIN DECREE.	607¾
1807	61	4	18	4	,,	Duke of Portland, 25 March 1807 to October 1809.	25 *Mar.* Div. Bank Stock 10.—7 *July.* Peace of TILSIT.—*Sep.* Danish Fleet surrender.—17 *Dec.* MILAN DECREE.—18 *Dec.* War with Russia.—SLAVE TRADE ABOLISHED.	628
1808	65⅞	4	11	1	,,		5 *May.* Treaty of Bayonne.—20 *July.* BAYLEN.—21 *Aug.* VIMIERA.—30 *Aug.* Convention of Cintra.	640¼
1809	66⅞	4	9	8	,,		5 *Jan.* Peace with Turkey.—16 *Jan.* CORUNNA.—Death of Moore.—4 *May.* Napoleon enters Vienna.—27 *July.* TALAVERA.—23 *Nov.* WALCHEREN left.	650
1810	67½	4	9	4	,,	Rt. Hon. Spencer Perceval.	6 *April.* Sir F. Burdett to the Tower.—*July.* Great Commercial Distress.—27 *Sept.* Battle of BUSACO.	662
1811	64¼	4	13	4	,,		5 *Feb.* Prince of Wales Prince Regent.—6 *Mar.* BARROSA.—10 *April.* War with America.	669⅓
1812	59	5	1	8	,,	Earl of Liverpool from June 1812 to April 1827.	11 *May.* Percival assassinated.—1 *July.* French enter Russia.—22 *July.* SALAMANCA.—7 *Sept.* BORODINO.—14 *Sept.* MOSCOW.—28 *Nov.* BEREZINA.	684¾
1813	61	4	18	4	,,		2 *May.* LUTZEN.—21 *June.* VITTORIA.—28 *Aug.* Battle before Dresden.—8 *Oct.* Wellington enters France.—16, 18 *Oct.* LEIPSIC.	716
1814	67	4	9	6	,,		31 *Mar.* Allies enter Paris.—10 *April.* TOULOUSE.—8 *Aug.* Peace with America.—1 *Nov.* War with Nepaul.	799¼
1815	59¾	5	0	4	Peace		6 *Mar.* Riots about Corn Laws.—1 *Mar.* Napoleon lands from Elba; 21, enters Paris.—18 *June.* WATERLOO.—26 *Sept.* Holy Alliance.	821¼
1816	62	4	16	9	,,		18 *Mar.* Income Tax repealed.—27 *Aug.* Algiers bombarded.—2 *Dec.* Riots in London. Spafields Mob.	864¾
1817	73⅛	4	2	0	,,		*Feb. June.* Serious Disturbances.—1 *Oct.* Bank partially resumes Cash Payments.—6 *Nov.* Princess Charlotte dies.	848¼
1818	77½	3	17	4	,,		9 *Oct.* Congress at Aix-la-Chapelle.	843½
1819	71⅞	4	3	5	,,		PEEL'S Bill for Resumption of Cash Payments.—Discontent in Manufacturing Districts.—16 *Aug.* Manchester Meeting.—PANIC.	845
1820	67⅞	4	8	4	,,		21 *Jan.* Revolution in Spain.—23 *Feb.* Cato Street Plot.—7 *July.* Revolution in Naples.—5 *July.* Trial of Queen Caroline.	843⅓
1821	73¾	4	1	4	,,		*Mar.* Bank resume Cash Payments.—5 *May.* Napoleon died at St. Helena.—19 *July.* Coronation George IV.	842½
1822	79½	3	15	10	,,		1 *Jan.* Greeks declare themselves free.—20 *June.* Bank discounts at 5.—5 *July.* Nav. 5 per Cents. reduced to 4.—20 *Oct.* Congress at Verona.	836¾
1823	78⅞	3	16	1	,,		25 *Mar.* Div. Bank Stock 8.—7 *April.* French enter Madrid.—21 *Aug.* TROCADERO.—30 *Oct.* Consuls sent to the New States of South America.	838

Average Price of 3 ℘ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1860.

Year.	Price of Consols.	Average Rate of Interest per Cent.	Peace or War.	[illegible]	Events, &c.	[illegible]
	£.	£. s. d.				
1824	93½	3 6 1	Peace	[illegible]	[illegible]	821
1825	84¼	3 10 11	"		[illegible]	817½
1826	79¼	3 15 10	"		[illegible]	814
1827	83¾	3 12 2	"	Canning Goderich	[illegible]	812
1828	86¼	3 10 11	"	Duke of Wellington	[illegible]	807½
1829	88¾	3 6 9	"		[illegible]	801½
1830	85¼	3 9 10	"		[illegible]	800
1831	79¾	3 15 3	"	[illegible]	[illegible]	780½
1832	83¾	3 11 9	"		7 June. Reform Bill passed.	787½
1833	87½	3 9 4	"		Bank Charter continued to 1 August, 1855.	780½
1834	90¼	3 6 5	"	[illegible]	[illegible]	787½
1835	90	3 5 11	"	[illegible]	[illegible]	779
1836	89¾	3 7 1	"		[illegible]	791½
1837	90¼	3 6 8	"		20 June. Queen Victoria's accession.	796
1838	92¼	3 4 7	"		[illegible]	786½
1839	91¼	3 5 7	"		[illegible]	785¼
1840	89¼	3 7 3	"		[illegible]	786½
1841	88¾	3 7 6	"	[illegible]	[illegible]	787½
1842	91¾	3 5 4	"		[illegible]*	790½
1843	94¾	3 3 3	"		[illegible]	791½
1844	99½	3 0 5	"		[illegible]	790½
1845	96¾	3 2 4	"		[illegible]	787½
1846	95¼	3 2 10	"	[illegible]	[illegible]	786
1847	86¾	3 9 3	"		[illegible]	790½
1848	85	3 10 7	"		[illegible]	791½
1849	93¾	3 4 4	"		[illegible]	791¼
1850	96¾	3 2 1	"		[illegible]	791
1851	97¼	3 1 4	"		[illegible]	787

* 22 June, 1842. Property and Income-Tax, 7d. in the pound.

AVERAGE PRICE OF 3 ₩ Cent. CONSOLIDATED ANNUITIES, with AVERAGE RATE of INTEREST. 1731 to 1860.

YEAR.	PRICE of CONSOLS.	AVERAGE RATE of INTEREST per Cent.	PEACE or WAR.	CHIEF ADMINISTRATIONS.	EVENTS, &c.	NATIONAL DEBT.
	£.	£. s. d.				Mill.
1852	98⅝	3 0 8	Peace	Earl of Derby, Mar. to Dec. 1852.	21 *Feb.* RUSSELL Ministry resign.—14 *Mar.* French 5 per cent. reduced to 4½ per cent. —*April.* BURMESE war.—14 *Sept.* Death of WELLINGTON.—1 *Nov.* Electric Telegraph to Paris.—2 *Dec.* LOUIS NAPOLEON declares himself Emperor of the French.	783
1853	95½	3 2 6	,,	Earl of Aberdeen, Dec. 1852 to 1 Feb. 1855.	*Jan.* BULLION in Bank £20,471,925.—29 *Jan.* Marriage of LOUIS NAPOLEON.—4 *May.* Submarine Telegraph to Ostend.—3 *May.* MENSCHIKOFF presents Russian Ultimatum to the Porte.—30 *June.* Peace with BURMAH. —2 *July.* Russian Army crosses the PRUTH. —*Sept.* CHOLERA severe in London.—24 *Sept.* Conference at OLMUTZ, Austria and Russia. Great fall in the Funds at London and Paris.—27 *Sept.* The PORTE declares War against Russia.—22 *Oct.* French and English Fleet enter the Bosphorus.—30 *Nov.* Russians destroy Turkish Fleet at Sinope.—5 *Dec.* France, England, Austria, and Prussia sign Protocol at Vienna for the re-establishment of peace between Russia and Turkey.	779½
1854	90½	3 6 3	War		12 *March.* Treaty between ENGLAND, FRANCE, and TURKEY.—27 *March.* FRANCE declares War against RUSSIA.—28 *March.* ENGLAND ditto.—22 *April.* ODESSA bombarded.—15 *June.* Russians raise the Siege of SILISTRIA.—20 *Sept.* Victory of the ALMA.—17 *Oct.* Bombardment of SEBASTOPOL begun.—25 *Oct.* BALACLAVA.—5 *Nov.* Battle of INKERMANN.—14 *Nov.* Dreadful Hurricane in Black Sea.	771
1855	90	3 6 8	,,	Lord Palmerston, From 8 Feb. 1855 to 19 Feb. 1858.	10 *Jan.* SARDINIA joins the Western Powers. —14 *Jan.* French Loan 500 Millions of Francs—Subscription, 2175 Millions.—2 *March.* Death of Emperor NICHOLAS.—13 *April.* Electric Telegraph to Crimea completed. Loan 16 Millions. Rothschild.—18 *Aug.* Queen VICTORIA arrives in Paris, and visits Universal Exhibition.—8 *Sept.* MALAKOFF taken by the French.—Fall of SEBASTOPOL.—29 *Sept.* Russians repulsed before KARS by Williams.—7 *Nov.* Bank of England* allowed to issue £475,000 additional notes.—Panic subsides.—26 *Nov.* KARS capitulates.—19 *Dec.* Treaty between WESTERN POWERS—SWEDEN and NORWAY.	780¾
1856	90¾	3 6 1	Peace		17 *Jan.* Russia accepts Austrian proposals for PEACE.—1 *Feb.* Protocol signed at Vienna by all the Powers as basis of Peace.—7 *Feb.* OUDE annexed.—29 *Feb.* Suspension of Hostilities in the Crimea.—29 *April.* Peace proclaimed in London.—8 *Oct.* Chinese seizure of a "*lorcha*" at Canton.—1 *Nov.* War proclaimed against PERSIA at Calcutta.	803½
1857	90¼	3 6 1	,,		24 *Jan.* Mutiny in INDIA commenced.—3 *April.* Mutiny at BARRACKPORE.—*May* 10, 11. Mutiny at MEERUT.—Mutineers march to Delhi.—20 *Aug.* Capture of DELHI.—12 *Nov.* BANK CHARTER Act of 1844 suspended by Government. —Panic abated and confidence restored.—17 *Nov.* LUCKNOW garrison relieved.	808
1858	96⅜	3 2 2	,,	Earl of Derby, From Feb. 1858.	19 *March.* Capture of LUCKNOW.—26 *May.* Treaty with CHINA.—5 *Aug.* Queen visits CHERBOURG.—26 *Aug.* Treaty with JAPAN. —*Aug.* Telegraphic Communication with America opened.—1 *Sept.* Expiration of East India Company's Government of INDIA. VICTORIA now Queen of India.	805½

* See NOTE (No. 3) BANK DISCOUNTS.

N.B.—PROPERTY AND INCOME-TAX. 16 June, 1854, 14*d.*; and 25 May, 1855, 16*d.*, in the pound.

AVERAGE PRICE OF 3 ℔ CENT. CONSOLIDATED ANNUITIES, with AVERAGE RATE of INTEREST. 1731 to 1867.

YEARS.	PRICE of Consols.	AVERAGE RATE of INTEREST per Cent.	PEACE or WAR.	[illegible]	EVENTS, &c.	NATIONAL DEBT.
	£	£ s. d.				Mill.
1859	95¼	3 1 3	Peace	[illegible]	[illegible]	800
1860	94⅛	3 3 0	„	[illegible]	[illegible]	802½
1861	91⅞	3 5 4	„	[illegible]	[illegible]	801½
1862	93¼	3 4 4	„	[illegible]	[illegible]	800½

Average Price of 3 ℔ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1867.

Year.	Price of Consols.	Average Rate of Interest per Cent.	Peace or War.	Chief Administrations.	Events, &c.	National Debt.
	£					Mill.
1863	92¾	3 4 9	Peace	Lord Palmerston from June 1859, to his death, in October, 1865.	17 *Jan.* Treaty of Commerce, France and Italy.—22 *Jan.* Revolution in Poland.—10 *March.* Prince of Wales married to Princess Alexandrina of Denmark.—19 *March.* Prince George of Denmark elected King of Greece.—7 *April* England, France and Prussia remonstrate with Russia about Poland.—19 *May.* Revolution in Madagascar. Radama II. killed.—28 *May.* Rupture between England and Brazil.—17 *July.* Outbreak of Maories, New Zealand.—16 *Aug.* Congress of Sovereigns at Paris. Insurrection at St. Domingo.—16 *Oct.* Prince of Schleswig Holstein claims that Duchy.—15 *Nov.* Accession of Christian, King of Denmark.—21 *Nov.* Annexation of the Ionian Islands to Greece arranged.—23 *Dec.* Hostile troops enter Holstein.	799½
1864	90⅛	3 6 6	"	"	21 *Jan.* Prussian troops enter Oldenburg and Hamburgh.—11 *April.* The Chincha Islands seized by Spain.—28 *May.* Maximilian arrives in Mexico.—19 *June.* Confederate Steamer Alabama destroyed by the Kearsarge.—18 *July.* Nankin taken, Taeping rebellion crushed.—1 *Aug.* Preliminaries of Peace signed at Vienna. Denmark cedes Holstein to Prussia and Austria.—18 *Aug.* Conclusion of Maori War.—1 *Sept.* Spain recognizes Maximilian as Emperor of Mexico.—5 *Oct.* Violent Cyclone in the Bay of Bengal, 70,000 Lives Lost.—10 *Oct.* Treaty of Commerce, China and Spain.—11 *Nov.* England recognizes Maximilian.—6 *Dec.* Lincoln re-elected President of United States, N. A.	790½†
1865	89½	3 7 0	"	"	8 *Feb.* Treaty of Commerce, France and Sweden.—12 *Feb.* Completion of Telegraphic communication with India.—14 *April.* President Lincoln assassinated. Johnson succeeds him.—10 *May.* Capture of President Davis.—7 *July.* American ports opened.—19th *July.* First great Fenian Meeting at Philadelphia.—27 *Aug.* Treaty of Gastein regarding Schleswig.—10 *Oct.* Negro insurrection in Jamaica.—18 *Oct.* Death of Lord Palmerston.—11-24 *Nov.* Arrest and escape of Fenian Head Centre Stephens.—13 *Nov.* War between Chili and Spain.—10 *Dec.* Death of King Leopold of Belgium.	786½
1866	87½	3 8 3	"	Earl Russell, from October, 1865 to July, 1866.	17 *Feb.* Suspension of the Habeas Corpus in Ireland.—23 *Feb.* War between Peru and Spain.—10 *May.* Stoppage of Overend, Gurney and Co. Panic in London, Government suspends Bank Charter Act.—14 *May.* Treaty of Alliance, Prussia and Italy.—7 *June.* Prussian troops enter Holstein.—18 *June.* Prussia declares War against Austria.—21 *June.* Fenian raid in Canada. Prussian troops enter Silesia and Bohemia.—24 *June.* Battle of Custozza: Austrians defeat Italians.—27 *June.* Battle of Nachod: Prussians defeat Austrians.—3 *July.* Battle of Sadowa, do.—4 *July.* Venetia ceded by Austria to France.—16 *July.* Prussians occupy Frankfort.—18 *July.* Austrian fleet	781½

† £6,000,000 cancelled in 1864, and a terminable annuity created in lieu thereof.

Average Price of 3 ⅌ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1870.

Year.	Price of Consols.	Average Rate of Interest per Cent.	Peace or War.	Chief Administrations.	Events, &c.	National Debt.
	£					Mill.
1866	$87\frac{1}{4}$	3 8 3	Peace.	Earl Russell, from Oct., 1865 to July, 1866.	defeats Italian off Lissa.—23 *July.* Reform Riot in Hyde Park.—27 *July.* Atlantic Cable laid to Newfoundland.—23 *Aug.* Treaty of Peace, Austria and Prussia.—2. *Sept.* Atlantic Cable of 1865 raised and completed.—6 *Sept.* King of Prussia annexes Hesse Cassel, Nassau, Hanover, and Frankfort-on-Main.—21 *Oct.* Treaty, Prussia and Saxony.—24 *Oct.* Prince Charles of Hohenzollern accepted by the Sultan as Hospodar of the Danubian Principalities.	$781\frac{1}{2}$
1867	93	3 4 6		Earl of Derby, from July, 1866 to February 24, 1868.	21 *Jan.* Schleswig-Holstein incorporated with Prussia.—13 *Feb.* Great Fenian Outbreak at Kerry.—Treaty, France, Prussia, and other Powers guaranteeing neutrality of Luxemburg.—8 *April.* Panic on Stock Exchange.—15 *May.* Queretaro in Mexico stormed, Maximilian taken prisoner.—6 *June.* Attempt at Paris to Assassinate Emperor of Russia.—8 *June.* Emperor of Austria crowned King of Hungary.—19. Maximilian executed.—12 *July.* Grand Naval Review at Spithead.—25 *Sept.* Arrest and Escape of Garibaldi.—18 *Oct.* Defeat of Garibaldians in Roman States.—28 *Oct.* Capture of Monte Rotondo by Garibaldi.—French Expedition to Civita Vecchia.—1 *Nov.* French Troops enter Rome, Italian Troops cross Papal Frontier.—13 *Dec.* Incendiary Fenian Explosion at Clerkenwell.	
1868	$93\frac{1}{4}$	3 4 0	War with Abyssinia.	Disraeli, from Feb 26, 1868, to Dec. 2, 1868.	21 *March.* Poland incorporated with Russia.—23. Attack on British Legation at Japan.—*April* 12. Magdala stormed. Emp. Theodore commits suicide.—10 *June.* Prince Michael of Servia assassinated.—3 *Aug.* French Loan £17,000,000.—3 *Sept.* Spanish Revolution.—30 Flight of Queen Isabella.—3 *Nov.* Grant appointed President United States, N.A.—11. Alabama Convention signed.—3 *Dec.* Riots in Paris.	749
1869	$92\frac{1}{2}$	3 4 7	Peace.	Gladstone, from December 3, 1868.	6 *Jan.* Paris Conference declares Turkey and Greece must not disturb peace of Europe.—12 *Feb.* Property of King of Hanover confiscated by Prussia.—26. Negro suffrage established, U.S.—2 *Mar.* U.S. Pledged to pay debts in gold.—8 Newfoundland joins Dominion of Canada.—9 *April.* Hudson's Bay Co. agree to cede all their territory to Canada.—Senate U.S. rejects Alabama Treaty.—8 *June.* Treaty to regulate frontiers, Turkey and Persia.—14. Serrano elected Regent in Spain.—21 *July.* French Atlantic Cable completed. 26. Irish Church Bill passed.—31. Telegraphs Act passed.—6 *Sept.* French Senatus Consultum altering constitution adopted.—23 *Oct.* Death of Earl Derby.—17 *Nov.* Opening of Suez Canal.—8 *Dec.* Œcumenical Council met at Rome.	$749\frac{1}{2}$
1870	$92\frac{3}{4}$	3 4 9			1 *Mar.* Defeat and death of Lopez, President of Paraguay.—2 *April.* Revolution in Venezuela.—21. Murder by Greek Brigands of English and Italian Secs. of Legation and others.—8 *May.* French Plebiscite votes confidence in Government, 7 mill. for, $1\frac{1}{2}$ mill. against.—25. Fenian Raid into Canada.—21 *June.* Massacre	$747\frac{1}{2}$

Average Price of 3 ℔ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1871.

Year.	Price of Consols.	Average Rate of Interest per Cent.	Peace or War.	Chief Administrations.	Events, &c.	National Debt.
	£					Mill.
1870	92½	3 4 9	Peace.	Gladstone, from December 3, 1868.	of French at Tien-tsin.—27. Death of Earl Clarendon.—3 *July.* Announcement that Prince Leopold of Hohenzollern had accepted Crown of Spain. 6. France objects.—11. Withdrawal of Prince Leopold.—16. France declares War against Prussia.—18. Bavaria, Wurtemburg, Baden, and Hesse join Prussia.—Œcumenical Council declares Infallibility of the Pope.—19. British Declaration of Neutrality.—23. Empress Eugenie appointed Regent of France.—1 *Aug.* Irish Land Bill passed.—2. French attack Saarbruck. —4. Prussians storm Heights of Weissenburg.—6. Prussian Successes at Worth and Forbach.—8. French Army leaves Rome.—9-12. Treaty guaranteeing Neutrality of Belgium signed by England, Prussia, and France.—12. Surrender of Nancy.—14, 16, 18. Prussian Victories at Courcelles, Vionville, and Gravelotte.—19. Bombardment of Strasburg.—9, 30, 31.—Prussian Successes at Mouzon, Beaumont, Douzy, and Bazeilles.—1 *Sept.* Battle of Sedan.—2. Surrender of Sedan, the Emperor Napoleon, 40 generals, and 100,000 prisoners taken.—4. Insurrection in Paris. Flight of Empress Regent.—5-13. Prussians occupy Rheims and Meaux.—17-20. Italians occupy Papal States and Rome.—19. Paris invested.—24. Surrender of Toul.—France refuses to make Peace.—17. Orleans occupied.—28. Strasburg taken.—5 *Oct.* Prussian Head quarters at Versailles.—9. Victor Emmanuel declares Rome and Papal States to form integral part of Italy.—16-18. Capture of Soissons and Vesoul.—21. Occupation of Chartres and St. Quentin.—27. Capture of Metz, 173,000 prisoners.—29. Occupation of Dijon.—*Nov.* Russian Despatch of Prince Gortchakoff repudiating treaty of 1856.—Election of Prince Amadeus of Italy to Throne of Spain.—18. Prussia proposes Conference to decide upon Russian claim to cancel treaty of 1856. 16, 25. Bavaria and Wurtemburg join German Confederation.—22. Rouen occupied.—23-27. Thionville and La Fere taken.—28. Lord Granville agrees to Conference.—Germans occupy Amiens.—30. Great Sortie from Paris repulsed.—3 *Dec.* Battle of Orleans.—5. Prince Amadeus accepts Crown of Spain.—10. German Empire established. —12-24. Capture of Phalsbourg and Montmedy.—21. Tours occupied.—27. Murderous attack on Prim.—30. Death of Prim.—31. Victor Emmanuel enters Rome.	747½
1871					2 *Jan.* King Amadeus enters Madrid.—17. Congress meets in London to discuss Black-Sea Question.—19. King William of Prussia proclaimed Emperor of Germany.—28. Capitulation of Paris. Armistice for 21 days agreed upon.—1 *Feb.* Engagements at Chauffaux and Tombacourt.—8. French National Assembly elected.—26. Treaty of Peace Prussia and France.—1 *Mar.* Germans occupy Paris. —French Nat. Assembly ratifies Treaty. —3. Germans evacuate Paris	

Average Price of 3 ₩ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1876.

Year	Price of Consols	Average Rate of Interest per Cent.	Peace or War	Chief Administrations	Events, &c.	National Debt
	£					Mill.
1871	[illegible]	3 4 6	Peace.	Gladstone, from December 9, 1868, to February 21, 1874.	[illegible]	[illegible]
1872	[illegible]	3 4 10			[illegible]	[illegible]
1873	[illegible]	3 4 9			[illegible]	[illegible]
1874	[illegible]	3 4 10	War with Ashantee. Peace.	Disraeli, from February 21, 1874.	[illegible]	[illegible]
1875	[illegible]	3 4 8			[illegible]	[illegible]
1876					[illegible]	

Average Price of 3 ℔ Cent. Consolidated Annuities, with Average Rate of Interest. 1731 to 1880.

Year	Price of Consols.	Average Rate of Interest per Cent.	Peace or War	Chief Ministers	Events, &c.	National Debt.
						7[illegible]
1876	95	3 1 1	Peace.	Earl Beaconsfield.	[illegible]	7[illegible]
1877	95¼	3 2 10	Peace.		[illegible]	736½
1878	95¼	3 3 0	Peace.		[illegible]	731
1879	97½	3 1 8	War with Zulus.		[illegible]	[illegible]
1880	98½	3 0 11	War with Zulus and Boers.	Gladstone, from April 28, 1880.	[illegible]	[illegible]
1881					[illegible]	

Statement of the Annual Average Prices of Wheat, Barley, and Oats, in England and Wales, from 1771 to 1860.

Years.	Annual Average Prices ℔ Imperial Quarter. Wheat.		Barley.		Oats.		Years.	Annual Average Prices ℔ Imperial Quarter. Wheat.		Barley.		Oats.	
	s.	d.	s.	d.	s.	d.		s.	d.	s.	d.	s.	d.
1771	48	7	26	5	17	2	1816	78	6	33	11	27	2
1772	52	3	26	1	16	8	1817	96	11	49	4	32	5
1773	52	7	29	2	17	8	1818	86	3	53	10	32	5
1774	54	3	29	4	18	4	1819	74	6	45	9	23	2
1775	49	10	26	9	17	0	1820	67	10	33	10	24	2
1776	39	4	20	9	15	5	1821	56	1	26	0	19	6
1777	46	11	21	1	16	1	1822	44	7	21	10	18	1
1778	43	3	23	4	15	7	1823	53	4	31	6	22	11
1779	34	8	20	1	14	5	1824	63	11	36	4	24	10
1780	36	9	17	6	13	2	1825	68	6	40	0	25	8
1781	46	0	17	8	14	1	1826	58	8	34	4	26	8
1782	49	3	23	2	15	7	1827	58	6	37	7	28	2
1783	54	3	31	3	20	5	1828	60	5	32	10	22	6
1784	50	4	28	8	18	10	1829	66	3	32	6	22	9
1785	43	1	24	9	17	8	1830	64	3	32	7	24	5
1786	40	0	25	1	18	6	1831	66	4	38	0	25	4
1787	42	5	23	4	17	2	1832	58	8	33	1	20	5
1788	46	4	22	8	16	1	1833	52	11	27	6	18	5
1789	52	9	23	6	16	6	1834	46	2	29	0	20	11
1790	54	9	26	3	19	5	1835	39	4	29	11	22	0
1791	48	7	26	10	18	1	1836	48	6	32	10	23	1
1792	43	0	27	7	16	9	1837	55	10	30	4	23	1
1793	49	3	31	1	20	6	1838	64	7	31	5	22	5
1794	52	3	31	9	21	3	1839	70	8	39	6	25	11
1795	75	2	37	5	24	5	1840	66	4	36	5	25	8
1796	78	7	35	4	21	10	1841	64	4	32	10	22	5
1797	53	9	27	2	16	3	1842	57	3	27	6	19	3
1798	51	10	29	0	19	5	1843	50	1	29	6	18	4
1799	69	0	36	2	27	6	1844	51	3	33	8	20	7
1800	113	10	59	10	39	4	1845	50	10	31	8	22	6
1801	119	6	68	6	37	0	1846*	54	8	32	8	23	8
1802	69	10	33	4	20	4	1847	69	9	44	2	28	8
1803	58	10	25	4	21	6	1848	50	6	31	6	20	6
1804	62	3	31	0	24	3	1849	44	3	27	9	17	6
1805	89	9	44	6	28	4	1850	40	3	23	6	16	5
1806	79	1	38	8	27	7	1851	38	6	24	9	18	7
1807	75	4	39	4	28	4	1852	40	9	28	6	19	1
1808	81	4	43	4	33	4	1853	53	3	33	2	21	0
1809	97	4	47	0	31	5	1854	72	5	36	0	27	11
1810	106	5	48	1	28	7	1855	74	8	34	9	27	5
1811	95	3	42	3	27	7	1856	69	2	41	1	25	2
1812	126	6	66	9	44	6	1857	56	4	42	1	25	0
1813	109	9	58	6	38	6	1858	44	2	34	8	24	6
1814	74	4	37	4	25	8	1859	43	9	33	6	23	2
1815	65	7	30	3	23	7	1860	53	3	36	7	24	5

* On 26th June, 1846, Sir Robert Peel's Corn Bill was passed.

TITHE COMMUTATION.

VALUE of a TITHE RENT CHARGE of £100, as fixed by the AVERAGE PRICES of WHEAT, BARLEY, and OATS, for the SEVEN YEARS preceding the years stated: Also the ANNUAL AVERAGE PRICES ₽ Imperial Quarter for those respective years.

Before the Year	Average Prices for Seven Years. Wheat ₽ Imperial Bushel.	Barley ₽ Imperial Bushel.	Oats ₽ Imperial Bushel.	Value of a Tithe Rent Charge of £100.	Annual Average Prices ₽ Imperial Quarter. Wheat.	Barley.	Oats.
	s. d.	s. d.	s. d.	£ s. d.	s. d.	s. d.	s. d.
1836	7 0¼	3 11½	2 9	100 0 0	48 6	32 10	23 1
1837	6 8½	3 11¾	2 9	98 13 9¾	55 10	30 4	23 1
1838	6 6¾	3 11¼	2 8¾	97 7 11	64 7	31 5	22 5
1839	6 6¼	3 9¾	2 8	95 7 9	70 8	39 6	25 11
1840	6 9	3 11¼	2 9½	98 15 9½	66 4	36 5	25 8
1841	6 11¾	4 1	2 10¼	102 12 5½	64 4	32 10	22 5
1842	7 3¾	4 2	2 11¼	105 8 2¼	57 3	27 6	19 3
1843	7 7¼	4 1¼	2 10½	105 12 2¼	50 1	29 6	18 4
1844	7 7¾	4 0½	2 9½	104 3 5½	51 3	33 8	20 7
1845	7 7	4 1¼	2 9	103 17 11¼	50 10	31 8	22 6
1846	7 4	4 1½	2 9	102 17 8¾	54 8	32 8	23 8
1847	7 0½	4 0	2 8½	99 18 10¼	69 9	44 2	28 8
1848	7 1¼	4 1½	2 9¼	102 1 0	50 6	31 6	20 6
1849	6 10¼	4 1¼	2 8¾	100 3 7¾	44 3	27 9	17 6
1850	6 7½	4 1¼	2 8½	98 16 10	40 3	23 6	16 5
1851	6 5¼	4 0	2 8	96 11 4¾	38 6	24 9	18 7
1852	6 2¼	3 10½	2 7½	93 16 11¼	40 9	28 6	19 1
1853	6 0½	3 9½	2 6¾	91 13 5¼	53 3	33 2	21 0
1854	6 0	3 9½	2 6¼	90 19 5	72 5	36 0	27 11
1855	6 0¾	3 7¾	2 6	89 15 8¾	74 8	34 9	27 5
1856	6 6	3 8½	2 7½	93 18 1¼	69 2	41 1	25 2
1857	6 11¼	3 11¼	2 9¼	99 13 7¼	56 4	42 1	25 0
1858	7 2¾	4 3½	2 11	105 16 3½	44 2	34 8	24 6
1859	7 4	4 5½	3 0¼	108 19 6¼	43 9	33 6	23 2
1860	7 4½	4 6½	3 1¼	110 17 8½	53 3	36 7	24 5
1861	7 4½	4 7¼	3 2	112 3 4¾	55 4	36 1	23 9
1862	7 0¼	4 7¼	3 1	109 13 6	55 5	35 1	22 7
1863	6 8¼	4 7½	3 0	107 5 2	44 9	33 11	21 2
1864	6 3½	4 5¾	2 11¼	103 3 10¾	40 2	29 11	20 1
1865	6 0	4 3½	2 10	98 15 10½	41 10	29 9	21 10
1866	5 11½	4 2¼	2 9½	97 7 9¼	49 11	37 5	24 7
1867	6 0¾	4 3	2 9¾	98 13 3	64 5	40 0	26 0
1868	6 3¼	4 3¾	2 10¼	100 13 8	63 9	43 0	28 1
1869	6 5¼	4 5¼	2 11	103 5 8¼	48 2	39 5	26 0
1870	6 3½	4 6½	2 11¾	104 1 0¼	46 11	34 7	22 10
1871	6 4	4 6¼	3 0¼	104 15 1	56 8	36 2	25 2
1872	6 7½	4 7¾	3 1¼	108 4 0¼	57 0	37 3	23 2
1873	6 10¾	4 9¼	3 1½	110 15 10¼	58 8	40 5	25 5
1874	7 0¾	4 10	3 1¾	112 7 3	55 9	44 11	28 10
1875	6 10¾	4 11	3 2½	112 15 6¾	45 1	38 5	28 8
1876	6 6¾	4 10	3 2½	110 14 11			

TITHE COMMUTATION.

Value of a Tithe Rent Charge of £100, as fixed by the Average Prices of Wheat, Barley, and Oats, for the Seven Years preceding the years stated: Also the Annual Average Prices ℔ Imperial Quarter for those respective years.

Average Prices for Seven Years.				Value of a Tithe Rent Charge of £100.	Annual Average Prices ℔ Imperial Quarter.		
Before the Year.	Wheat ℔ Imperial Bushel.	Barley ℔ Imperial Bushel.	Oats ℔ Imperial Bushel.		Wheat.	Barley.	Oats.
	s. d.	s. d.	s. d.	£ s. d.	s. d.	s. d.	s. d.
1876	6 6¾	4 10	3 2½	110 14 11	46 2	35 2	26 3
1877	6 6½	4 9	3 2½	109 16 11½	56 9	39 8	25 11
1878	6 8½	4 10¼	3 3¼	112 7 5¼	46 5	40 2	24 4
1879	6 6¼	4 11	3 3	111 15 1½	43 10	34 0	21 9
1880	6 3½	4 10¼	3 2¾	109 17 9¼	44 4	33 1	23 1
1881	6 0½	4 8¾	3 2¼	107 2 10½			

TABLE OF COINS AND CURRENCY.

☞ The values are calculated at the Mint price for GOLD, viz. £3 17s. 10½d. ℔ oz. standard quality, and for SILVER at 5s. ℔ oz. of standard quality.

COUNTRY.	METAL.	DENOMINATION OF COIN.	ENGLISH VALUE. £ s. d.	MONIES OF ACCOUNT.
AUSTRIA	GOLD	*Souverain*	1 7 10½	Florin or Gulden of 100 Kreutzers.
		Ducat	0 9 5	
		Krone	1 7 4	
		½ Krone	0 13 8	
	SILVER	Double Thaler = 3 Florins	0 5 10	
		Thaler = 1½ Florins	0 2 11	
		2 Florins or Guldens	0 3 11	
		Florin	0 1 11½	
BADEN		Same as Bavaria.		
BAVARIA	GOLD	*Ducat*	0 9 4½	Gulden of 60 Kreutzers.
		Krone	1 7 4	
	SILVER	Gulden	0 1 8	
BELGIUM		Same as France.		
BOMBAY	GOLD	*Mohur*	1 9 3	Rupee of 4 quarters = 400 reas.
		Pagoda	0 7 3½	
	SILVER	Rupee	0 1 10¼	
BOLIVIA	GOLD	Quadruple	3 4 8	Piastre of 8 reals.
	SILVER	Piastre	0 4 3	
		Real	0 0 6¼	
BRAZILS	GOLD	10,000 Reis	1 2 5	Milreis of 1000 reis.
	SILVER	2000 „	0 4 5	
		1000 „	0 2 2½	
		500 „	0 1 1¼	
		200 „	0 0 5½	
BREMEN	GOLD	*Louis*	0 16 5	Rixdaler of 72 grotes.
		Rixdaler	0 3 3½	
BRITISH PROVINCES, N. AMERICA	SILVER	Dollar	0 4 2	Pounds of 20 Shillings = 240 Pence; also Dollar of 100 Cents.
		Dollar—Nominal currency value	0 5 0	
BRUNSWICK		Coins same as Prussia.		Thaler of 24 Gute Groschen.
CALCUTTA	GOLD	*Mohur*	1 9 3	Rupee of 16 Annas.
		Pagoda	0 7 3½	
	SILVER	Rupee	0 1 10¼	
C. OF GOOD HOPE		Coins as in England.		Pounds, Shillings, and Pence; also in Rixdollars of 8 Shillings.
		Rixdollar in paper, nominal	0 1 6	
CENTRAL & S. AMERICA	SILVER	Dollar or Piastre	0 4 3	Dollar of 8 Reales.
		Reale	0 0 6¼	
CHINA	SILVER	Tael	0 6 6½	Tael = 10 Mace = 100 Candarees = 1000 cash.
DENMARK	GOLD	*Christian*	0 16 7	Rigsdaler of 96 skillings.
	SILVER	Specie Daler = 48 Styver	0 4 5	
		Rigsdaler = 6 Mark	0 2 2½	
		Mark	0 0 4½	
EGYPT	GOLD	100 Piastres	1 0 3½	Piastre of 40 Paras.
	SILVER	10 „	0 1 11½	
		1 „	0 0 2¼	

TABLE OF COINS AND CURRENCY—*continued.*

☞ The values are calculated at the Mint price for GOLD, viz. £3 17s. 10½d. ℔ oz. standard quality, and for SILVER at 5s. ℔ oz. of standard quality.

COUNTRY.	METAL.	DENOMINATION OF COIN.	ENGLISH VALUE. £	s.	d.	MONIES OF ACCOUNT.
ENGLAND	GOLD	Sovereign weighs 5 dwts. 3¼ grs., and contains 113·1 pure gold.	1	0	0	Pound of 20 shillings = 240 pence.
	SILVER	*Crown* . . . Nominal	0	5	0	
		Florin . . . . Do. .	0	2	0	
		Shilling . . . . Do. .	0	1	0	
	BRONZE	Penny . . . . Do. .	0	0	1	
FRANCE	GOLD	20 Francs	0	15	10½	Franc of 100 Centimes.
	SILVER	5 „	0	3	11	
		2 „ . . . . Nominal	0	1	7	
		1 „ . . . . . Do. .	0	0	9½	
FRANKFORT O'T' MAINE		Same as Bavaria.				Florin of 60 Kreutzers.
GIBRALTAR	GOLD	*Doubloon*	3	4	0	Dollar of 12 Reales.
	SILVER	*Hard Dollar*	0	4	2	
GREECE	GOLD	20 Drachmas	0	14	2½	Drachmè of 100 Lepta.
	SILVER	5 „	0	3	6	
		Drachmè	0	0	8½	
HAMBURGH	GOLD	*Ducat*	0	9	4½	Mark Banco of 16 Schillings; 1 Schilling = 12 Pfennings.
	SILVER	3 Mark current	0	3	7	
		Mark current	0	1	2½	
		Mark Banco . Nominal	0	1	5½	
HANOVER		Coins same as Prussia.				Thaler of 24 Gute Groschen.
HOLLAND	GOLD	*Ducat*	0	9	4½	Guilder or Florin of 100 Cents, or 20 Stivers.
		20 Guilders	1	13	2	
		5 „	0	8	2½	
		Rixdaler = 2½ Guilders .	0	4	2	
	SILVER	Guilder	0	1	8	
ITALY		Coins same as France—Lira = Franc	0	0	9½	Lira of 100 Centesimi.
JAPAN	GOLD	Cobang	0	5	8	In Boos.
	SILVER	Boo	0	1	5	
LUBEC		Same as Hamburgh.				
MADRAS		Same as Calcutta.				
MEXICO	GOLD	Onza or Doubloon . . .	3	4	8	Dollar of 8 Reals; 1 Real = 4 Quartillos.
		Pistole	0	16	2	
	SILVER	Dollar or Piastre	0	4	3	
		Real	0	0	6½	
NORWAY	SILVER	Specie Daler	0	4	5	Specie Daler of 120 Skillings.
		Ort or Mark	0	0	10½	
		12 Skilling	0	0	5¼	
PIEDMONT		Coins same as France.				
POLAND		Coins same as Russia.				
PORTUGAL	GOLD	Crown of 5000 Reis . . .	1	3	11	Milreis of 1000 Reis.
		Milreis	0	4	8½	
	SILVER	Teston of 100 Reis . . .	0	0	4½	
PRUSSIA	GOLD	*Freidrich*	0	16	5½	Thaler of 30 Silver Groschen.
		Krone	1	7	4	
	SILVER	Thaler	0	2	11	
		10 Silber Groschen . . .	0	0	11¾	
		5 „ . . .	0	0	5¾	
ROME	GOLD	10 Scudi	2	2	8	Scudo Romano of 100 Bajocchi.
	SILVER	Scudo = 10 Paoli	0	4	2	
		Paolo	0	0	5	

GERMANY.—The Reichsmark of 100 pfennige = 1s. is now used as the monetary integer.

TABLE OF COINS AND CURRENCY—*continued.*

☞ The values are calculated at the Mint price for GOLD, viz. £3 17*s.* $10\frac{1}{2}$*d.* ℥ oz. standard quality, and for SILVER at 5*s.* ℥ oz. of standard quality.

COUNTRY.	METAL.	DENOMINATION OF COIN.	ENGLISH VALUE. £ *s.* *d.*	MONIES OF ACCOUNT.
RUSSIA	GOLD	*Imperial*	1 12 $2\frac{1}{4}$	Rouble of 100 Copecks.
	SILVER	Rouble	0 3 1	
SAXONY		Coins same as Prussia.		Thaler of 30 New Groschen.
SPAIN	GOLD	Onza or Doubloon	3 4 8	Reals de Vellon of 100 Centimes.
		Cuarenta	0 8 $2\frac{1}{2}$	
		Durillo or Vienten	0 4 $1\frac{1}{2}$	
	SILVER	Duro	0 4 2	
		Escudo = 10 Reals Vellon	0 2 1	
		Real Vellon	0 0 $2\frac{1}{2}$	
SWEDEN	SILVER	Specie Rigsdaler	0 4 5	Rigsdaler Banco of 48 Skillings.
		Rigsdaler Banco	0 1 8	
SWITZERLAND		Silver coins same as France		Franc of 100 Centimes.
TURKEY	GOLD	Medjidie or Lira = 100 Piastres	0 18 0	Piastre of 100 Aspres.
		Yarim or $\frac{1}{2}$ Lira = 50 Piastres	0 9 0	
	SILVER	Ghiumuk or silver Medjidie	0 3 6	
		Yarim or $\frac{1}{2}$ silver Medjidie	0 1 9	
		Piastre = 40 Paras	0 0 $2\frac{1}{4}$	
UNITED STATES, N. A.	GOLD	Eagle	2 0 11	Dollar of 100 Cents.
	SILVER	Dollar	0 4 2	
WURTEMBURG	GOLD	Krone	1 7 4	Gulden of 60 Kreutzers.
	SILVER	Gulden	0 1 8	

N.B.—The Coins in italics are not now issued, but many remain in circulation.

BRITISH STANDARD GOLD.

	oz.	dwts.		grains.			dwts.	grs.		grains.
1 lb. contains	11	0	pure Gold or	5280		1 oz. contains	18	8	pure Gold or	440
and	1	0	Alloy or	480		and	1	16	Alloy or	40
	12	0	= 1 lb. or	5760			20	0	= 1 oz. or	480

BRITISH STANDARD SILVER.

	oz.	dwts.		grains.			dwts.	grs.		grains.
1 lb. contains	11	2	pure Silver or	5328		1 oz. contains	18	12	pure Silver or	444
and	0	18	Alloy or	432		and	1	12	Alloy or	36
	12	0	= 1 lb. or	5760			20	0	= 1 oz. or	480

STANDARD SILVER PLATE CONTAINS THE SAME ALLOY AS THE COIN.

Gold Plate and Jewellery are now stamped of the following fineness and value, the Hall Marks being numbered accordingly.

				£	*s.*	*d.*
22 carat,	containing	$\frac{11}{12}$-ths fine gold,	worth	£3	17*s.*	$10\frac{1}{2}$*d.* per oz.
18 ,,	,,	$\frac{3}{4}$-ths ,,	,,	3	3	$8\frac{1}{2}$
15 ,,	,,	$\frac{5}{8}$-ths ,,	,,	2	13	$1\frac{1}{4}$
12 ,,	,,	$\frac{1}{2}$,,	,,	2	2	$5\frac{3}{4}$
9 ,,	,,	$\frac{3}{8}$-ths ,,	,,	1	11	$10\frac{1}{4}$

SWEDEN AND NORWAY.—The KRONE of 100 öre = 1*s.* $1\frac{1}{4}$*d.* is now the legal integer.

TABLE XII.

MONIES OF ACCOUNT, AND PAR OF EXCHANGE.

TABLE showing the value of the MONIES OF ACCOUNT of the principal Places with which England has EXCHANGE transactions, Silver being valued at 5*s.* ℔ oz.; also the PAR OF EXCHANGE on this hypothesis.

			s. d.			
PETERSBURG	100 Copecks	= 1 Rouble (Silver)	= 3 $1\frac{1}{2}$	giving	6 Roubles 40 Copecks	= £1.
BERLIN	30 Silver Groschen	= 1 Prussian Dollar	= 2 $10\frac{3}{4}$	„	6 Dollars 27 Silver Groschen	= £1.
COPENHAGEN	96 Skillings	= 1 Rig. Dollar	= 2 $2\frac{1}{2}$	„	9 Dollars 10 Skillings	= £1.
HAMBURGH	16 Schillings	= 1 Mark	= 1 $5\frac{1}{2}$	„	13 Marks $10\frac{1}{2}$ Schillings	= £1.
AMSTERDAM	100 Centimes	= 1 Florin	= 1 8	„	11 Florins 97 Centimes	= £1.
PARIS	100 Centimes	= 1 Franc	= 0 $9\frac{1}{2}$	„	25 Francs 57 Centimes	= £1.
FRANKFORT	60 Kreutzers	= 1 Gulden	= 1 $7\frac{3}{8}$	„	$12\frac{7}{16}$ Guldens or Florins	= £1.
VIENNA	100 Kreutzers	= 1 Florin	= 1 $11\frac{1}{2}$	„	10 Florins 32 Kreutzers	= £1.
VENICE NAPLES GENOA LEGHORN	100 Centesimi	= 1 Lira Nuova	= 0 $9\frac{1}{2}$	„	25 Lire 57 Centesimi	= £1.
MADRID	15 Reals Vellon	= 1 Dollar of Plate	= 3 $1\frac{3}{4}$	„	6 Dollars $5\frac{1}{2}$ Reals	= £1.
Ditto	20 Reals Vellon	= 1 Hard Dollar	= 4 2	„	4 Dollars 16 Reals	= £1.
LISBON	1000 Reas	= 1 Milreas	= 4 8	„	4 Milreas 285 Reas	= £1.
NEW YORK	100 Cents	= 1 Dollar	= 4 2	„	4 Dollars 80 Cents	= £1.
RIO JANEIRO	1000 Reas	= 1 Milreas	= 2 7	„	7 Milreas 777 Reas	= £1.
HAVANNAH	100 Cents	= 1 Dollar	= 4 $6\frac{2}{100}$	„	4 Dollars 41 Cents	= £1.

MODERN ROAD MEASURE,

Being a Comparative View of the Itinerary Measures used in different Countries.

		Length in English Yards.	English Miles.		English Miles.	Miles, &c. of different Countries.
		Yards.	Miles. Parts.			Miles. Prts.
Arabia . .	Mile	2148.	100 = 122·04	and	100 =	81·93
Bohemia .	do.	10137.	100 = 575·96	„	100 =	17·36
Brabant .	League	6076.	100 = 345·22	„	100 =	28·96
Burgundy .	do.	6183.	100 = 351·36	„	100 =	28·46
China . .	Li	632.	100 = 35·91	„	100 =	278·48
Denmark .	Mile	8244.	100 = 468·41	„	100 =	21·35
England .	do.	1760.	100 = 100·	„	100 =	100·
	Geographical Mile . .	2025.	100 = 115·05	„	100 =	86·91
Flanders .	League	6864.	100 = 390·	„	100 =	25·64
France . .	Kilomètre	1093.	100 = 62·10	„	100 =	161·02
	Legal League of 2000 Toises	4263.	100 = 242·21	„	100 =	41·28
	Astronomical League .	4860.	100 = 276·13	„	100 =	36·21
	Marine League	6076.	100 = 345·22	„	100 =	28·96
Germany .	Long Mile	10126.	100 = 575·34	„	100 =	17·38
	Short Mile.	6859.	100 = 389·71	„	100 =	25·66
	Geographical Mile . .	8101.	100 = 460·28	„	100 =	21·72
Hamburgh .	Mile	8244.	100 = 468·41	„	100 =	21·35
Hanover .	do.	11559.	100 = 656·76	„	100 =	15·22
Hesse . .	do.	10547.	100 = 599·26	„	100 =	16·68
Holland .	do.	8101.	100 = 460·28	„	100 =	21·72
Hungary .	do.	9113.	100 = 517·78	„	100 =	19·31
Ireland .	do.	2240.	100 = 172·61	„	100 =	78·57
Italy . .	do.	2025.	100 = 115·05	„	100 =	86·91
Lithuania .	do.	9781.	100 = 555·73	„	100 =	18·00
Oldenburgh	do.	10820.	100 = 614·77	„	100 =	16·26
Poland . .	Long Mile	8101.	100 = 460·28	„	100 =	21·72
	Short Mile	6075.	100 = 345·17	„	100 =	28·97
Portugal .	League	6760.	100 = 384·09	„	100 =	26·03
Prussia .	Mile	8237.	100 = 480·68	„	100 =	21·37
Rome . .	do.	1628.	100 = 92·50	„	100 =	108·11
Russia . .	Verst	1167.	100 = 66·30	„	100 =	150·81
Saxony . .	Mile	9905.	100 = 562·78	„	100 =	17·76
Scotland .	do.	1984.	100 = 112·72	„	100 =	88·70
Silesia .	do.	7083.	100 = 402·44	„	100 =	24·84
Spain . .	Common Legua of 8000 Varas	7416.	100 = 421·36	„	100 =	23·73
	Legal Legua of 5000 Varas	4635.	100 = 263·35	„	100 =	37·97
Swabia . .	Mile	10126.	100 = 575·34	„	100 =	17·38
Sweden . .	do.	11700.	100 = 664·77	„	100 =	15·04
Switzerland	do.	9153.	100 = 520·05	„	100 =	19·23
Turkey . .	Berri	1826.	100 = 103·75	„	100 =	96·38
Tuscany .	Mile	1808.	100 = 102·72	„	100 =	97·34
Westphalia	do.	12151.	100 = 690·39	„	100 =	14·48

ANCIENT ITINERARY MEASURE.

		Length in English Yards.	English Miles.	English Miles.	No. of each in 100 Engl. Miles.
		Yards.	Miles. Parts.		Prts.
JEWISH	Resine . . . . 7½ = 1 Ancient Roman Mile.	215.	100 = 12·21	and 100 =	818·60
PERSIAN	Parasang . . . . . . 1 = 1/25 of a Degree. 1 = 3 English Geo. Miles.	6075.	100 = 345·17	„ 100 =	28·97
EGYPTIAN	Schœne . . . . 1 = 4 Ancient Roman Miles.	6448.	100 = 366·36	„ 100 =	27·29
GREEK	Olympic Stadium * . . 1 = ⅛ Ancient Roman Mile.	201¼.	100 = 11·44	„ 100 =	873·44
	Pythic Stadium †. . . 1 = 1/10 Ancient Roman Mile.	161¼.	100 = 9·16	„ 100 =	1091·81
ROMAN	Ancient Mile . . . . . 1 = 8 Olympic Stadia.	1612.	100 = 91·59	„ 100 =	109·18
GALLIC	Leuca . . . . 1 = 1½ Ancient Roman Mile.	2418.	100 = 137·38	„ 100 =	72·78
ARABIAN	Great Mile . . . . . . {Used in Palestine at the time of the Crusades.} 1 = 1½ Ancient Roman Mile.	2418.	100 = 137·38	„ 100 =	72·78

SCRIPTURE MEASURES OF LENGTH.

	Yards. Parts.	Feet. Parts.	
Schœnus . . .	= 46·20	or 138·60	or 138½ feet.
Arabian Pole .	= 4·62	„ 13·86	„ 14 „
Ezekiel's Reed	= 3·465	„ 10·395	„ 10½ „
Fathom . . .	= 2·31	„ 6·93	„ 7 „
Sacred Cubit		= 1·7325	„ 20¾ inches.
Lesser Cubit		= 1·485	„ 18 „
		Inches. Parts.	
Span		= 8·91	„ 9 „
Palm		= 2·97	„ 3 „
Digit		= 0·7425	„ ¾ „

ANCIENT MEASURES.

		Inches. Parts.	
Egyptian	cubit	= 13·00	
Olympic	„	= 18·132	or 18⅛ inches.
Pythic	„	= 14·62	„ 14⅝ „
Olympic	foot	= 12·088	„ $12\frac{1}{11}$ „
Pythic	„	= 9·75	„ 9¾ „
Macedonian	„	= 13·92	„ $13\frac{9}{10}$ „
Sicilian, of Archimedes	„	= 8·75	„ 8¾ „
Roman	„	= 11·60	„ $11\frac{6}{10}$ „
Ditto	cubit	= 17·40	„ $17\frac{4}{10}$ „

* The Olympic Stadium was used in Peloponnesus—Attica—Sicily, and the Greek Cities in Italy.

† The Pythic Stadium was used in Thessaly—Illyria—Phocis—Thrace, and at Marseilles in Gaul.

FRENCH WEIGHTS AND MEASURES.

LONG MEASURE.	1 Mètre	=	39·371	English	inches.
	1 Hectomètre	=	328·09	„	feet.
	1 Kilomètre	=	1093·638	„	yards.
	1 Myriamètre	=	6·2138	„	miles.
SOLID MEASURE.	1 Stère or Cubic Mètre	=	35·3174	„	cubic feet.
MEASURE OF CAPACITY.	1 Litre	=	1·7608	„	imperial pints.
	1 Hectolitre	=	22·	„	imperial gallons.
SUPERFICIAL MEASURE.	1 Are	=	119·6046	„	square yards.
	1 Hectare	=	2·474	„	acres.
WEIGHT.	1 Gramme	=	15·434	„	grains troy.
	1 Kilogramme	=	2·6803	„	lbs. troy.
	1 Ditto	=	2·2055	„	lbs. avoirdupois.

In order to express the DECIMAL proportion, the following mode has been adopted:

For MULTIPLIERS—The addition of the word DECA means 10 times.

HECTO	„	100 „
KILO	„	1,000 „
MYRIA	„	10,000 „

For DIVISORS—The addition of the word DECI expresses the 10th part.

CENTI	„	100th „
MILLI	„	1000th „

Thus, HECTOMETRE means 100 METRES.

CENTIMETRE means the 100th part of a METRE.

The TOISE usuelle	= 2 METRES.
PIED, or FOOT	= $\frac{1}{3}$rd METRE.
INCH	= $\frac{1}{36}$th METRE.
AUNE	= $1\frac{1}{5}$th METRE.
BOISSEAU usuel	= $12\frac{1}{2}$ LITRES = 0·3439 Imperial BUSHEL, or rather more than $\frac{1}{3}$rd.
LITRON usuel	= 1·074 PARIS PINT or = $1\frac{1}{2}$ ENGLISH PINTS.

COMPARATIVE LENGTH OF THE FOOT IN DIFFERENT COUNTRIES.

	in. parts.		in. parts.
AUSTRIA (Vienna)	12·45	MALTA	11·16
BELGIUM (Antwerp)	11·24	NAPLES (Palermo)	10·38
ENGLAND	12·	PRUSSIA (Berlin)	12·19
FRANCE (Pied du Roi)	12·78	RHINELAND	12·35
GENEVA	19·21	RUSSIA	13·75
HAMBURGH	11·28	SPAIN	11·12
HANOVER	11·45	SWEDEN	11·68
HOLLAND (Amsterdam)	11·14	VENICE	13·68

FRENCH MEASURES.

VALUE OF MILLIMETRES IN ENGLISH INCHES.

Millimetres.	English Inches.	Millimetres.	English Inches.	Millimetres.	English Inches.
1	0·0393 7079	75	2·9528	185	7·2835
2	0·0787 4158	80	3·1496	190	7·4804
3	0·1181 1237	85	3·3465	195	7·6773
4	0·1574 8316	90	3·5433	200	7·8741
5	0·1968 5395	95	3·7402	250	9·8426
6	0·2362 2474	100	3·9370	300	11·8112
7	0·2755 9553	105	4·1339	350	13·7797
8	0·3149 6632	110	4·3307	400	15·7483
9	0·3543 3711	115	4·5276	450	17·7168
10	0·3937 079	120	4·7244	500	19·6853
15	0·5905	125	4·9213	550	21·6539
20	0·7874	130	5·1182	600	23·6224
25	0·9842	135	5·3150	650	25·5910
30	1·1811	140	5·5119	700	27·5595
35	1·3779	145	5·7087	750	29·5280
40	1·5748	150	5·9056	800	31·4966
45	1·7716	155	6·1024	850	33·4651
50	1·9685	160	6·2993	900	35·4337
55	2·1653	165	6·4961	950	37·4022
60	2·3622	170	6·6930	1000	39·3707
65	2·5591	175	6·8898		
70	2·7559	180	7·0867		

TABLE OF THE CORRESPONDING HEIGHTS OF THE BAROMETER IN MILLIMETRES AND ENGLISH INCHES.

Millimetres.	English Inches.	Millimetres.	English Inches.	Millimetres.	English Inches.
720	28·347	741	29·174	761	29·961
721	28·386	742	29·213	762	30·000
722	28·425	743	29·252	763	30·039
723	28·465	744	29·292	764	30·079
724	28·504	745	29·331	765	30·118
725	28·543	746	29·370	766	30·158
726	28·583	747	29·410	767	30·197
727	28·622	748	29·449	768	30·236
728	28·662	749	29·488	769	30·276
729	28·701	750	29·528	770	30·315
730	28·740	751	29·567	771	30·355
731	28·780	752	29·606	772	30·394
732	28·819	753	29·645	773	30·433
733	28·858	754	29·685	774	30·473
734	28·898	755	29·724	775	30·512
735	28·937	756	29·764		
736	28·976	757	29·803		
737	29·016	758	29·843		
738	29·055	759	29·882		
739	29·095	760	29·922		
740	29·134				

SPECIFIC GRAVITIES.—Temperature 60° F. Water = 1.

Metals.	Specific Gravity.	Weight of Cubic Foot.	Metals.	Specific Gravity.	Weight of Cubic Foot.
		lbs. ozs.			lbs. ozs.
Platinum	20·98	1311·25	Nickel	8·27	516·87
Gold	19·26	1203·75	Iron, Cast	7·23	451·87
Iridium	18·68	1167·50	do. Malleable	7·79	486·87
Tungsten	17·50	1093·75	Soft Steel	7·85	490·62
Mercury	13·57	848·12	Molybdenum	7·40	462·50
Palladium	11·30	718·75	Tin	7·30	456·25
Lead	11·35	709·31	Zinc	7·00	437·50
Silver	10·47	654·37	Manganese	6·85	428·12
Bismuth	9·80	612·50	Antimony	6·70	418·75
Uranium	9·00	562·50	Tellurium	6·10	381·25
Copper	8·90	556·25	Arsenic	5·80	362·50
Cadmium	8·60	537·50	Titanium	5·30	331·25
Cobalt	8·53	533·12	Sodium *	0·97	60·62
Brass	8·40	525·00	Potassium	0·86	53·75

Building and Other Materials.	Specific Gravity.	Weight of Cubic Foot.	Building and Other Materials.	Specific Gravity.	Weight of Cubic Foot.
		lbs. ozs.			lbs. ozs.
Alabaster	2·699	168·68	Gravel	1·900	118·75
Basalt	2·864	179·00	Lime, of Stone	·843	52·69
Brick	1·521	95·06	do. Chalk	·704	44·00
do.	2·168	135·50	Limestone, Balsover	2·316	144·75
Brickwork in Cement	1·800	112·50	do. Blue-lias	2·467	154·19
do. in Mortar	1·568	98·00	do. Plymouth	2·677	167·31
Concrete, Portland Cement	2·272	142·00	do. Purbeck	2·601	162·56
			Marble, Statuary	2·638	164·87
do. common Lime	1·900	118·75	Mortar	1·751	109·44
Cement, Portland	1·280	80·00	Oolite, Bath	1·930	[illegible]
do. Roman	1·016	63·50	do. Portland	2·145	134·06
Chalk	2·315	144·68	Porphyry	2·765	172·81
Clay, Medway	1·440	90·00	Pozzolana?	[illegible]	[illegible]
do. Common	2·000	125·00	Sand, River	1·886	117·87
Coal, Newcastle	1·257	78·56	Sandstone, Bramley Fall	2·506	156·62
do. Welsh	1·337	83·56			
do. Cannel	1·300	81·25	do. Darley Dale	2·628	164·25
do. do.	1·400	87·50	do. Craigleith	2·266	141·62
Cork	·744	46·50	do. York Landing	2·320	145·00
Flint	2·630	164·37			
Glass, Plate	2·453	153·31	Serpentine, Green	2·574	160·87
Granite, Cornish	2·662	166·37	Slate, Welsh	2·888	180·50
do. Aberdeen	2·625	164·06	Sulphur	2·033	127·06
do. Red Egyptian	2·654	165·87	Tile	1·814	113·37

COMPARATIVE VIEW OF SPECIFIC GRAVITIES. (Hydrogen.)

	Cubic Inches.	Weight.	Specific Gravity, Air = 1.	Specific Gravity, Water = 1.
Hydrogen	100	2·138 grains	0·0692	[illegible]
Air	100	31·000 „	1·0000	[illegible]
Steam	100	19·220 „	·6200	[illegible]
Ice	100	[illegible] „	[illegible]	[illegible]
Water	100	[illegible] „	[illegible]	1·000000
Platinum	100	[illegible] „	[illegible]	[illegible]

* [illegible]. Sp. Gravity [illegible], and weight of Cubic Foot [illegible].

SPECIFIC GRAVITIES—*continued.*

TIMBER.	Specific Gravity.	Weight of Cubic Foot.	TIMBER.	Specific Gravity.	Weight of Cubic Foot.
		lbs. per			lbs. per
Alder	·800	[illegible]	Mahogany, Honduras	·560	35·00
Ash	[illegible]	[illegible]	Oak, English	[illegible]	58·37
Beech	[illegible]	[illegible]	" Canadian	·872	[illegible]
Birch	·792	49·50	" Dantzic	·756	47·25
Box	[illegible]	60·00	Green Heart	1·000	62·50
Cedar, American	·561	[illegible]	Pear Tree	[illegible]	[illegible]
Cork	·240	15·00	Pine, Red	·657	41·06
Ebony	1·250	78·12	" American Yellow	·461	[illegible]
Elm	[illegible]	[illegible]	Plane Tree	[illegible]	[illegible]
Fir	[illegible]	36·75	Sycamore	[illegible]	43·12
Larch	[illegible]	[illegible]	Teak	·657	41·06
Lignum Vitæ	[illegible]	[illegible]	Walnut	[illegible]	[illegible]
Mahogany, Spanish	·800	50·00	Willow	[illegible]	36·56

LIQUIDS.	Specific Gravity.	Weight of Cubic Foot.	LIQUIDS.	Specific Gravity.	Weight of Cubic Foot.
		lbs. per			lbs. per
Water, distilled	1·000	[illegible]	Oil of Turpentine	·870	[illegible]
" Sea	[illegible]	[illegible]	Essential Oil of Lavender	·894	55·87
" of Dead Sea	1·240	[illegible]	Linseed Oil	[illegible]	[illegible]
Alcohol	[illegible]	[illegible]	Olive Oil	[illegible]	[illegible]
Proof Spirit	[illegible]	[illegible]	Whale Oil	[illegible]	[illegible]
Port Wine	·997	[illegible]			
Bordeaux Wine	[illegible]	[illegible]	MISCELLANEOUS.		
Ether, Sulphuric	[illegible]	[illegible]	Wax, Bees'	[illegible]	[illegible]
Acids, Muriatic	[illegible]	[illegible]	Spermaceti	[illegible]	[illegible]
" Nitric	[illegible]	[illegible]	Tallow	[illegible]	[illegible]
" Sulphuric	1·841	115·06	Butter	[illegible]	[illegible]
Ammonia, liquid	[illegible]	[illegible]			

GASEOUS BODIES.	Specific Gravity.	Weight of 100 Cubic Inches.	GASEOUS BODIES.	Specific Gravity.	Weight of 100 Cubic Inches.
		Grs. Per.			Grs. Per.
Hydrogen	0·0694	[illegible]	Carbonic Acid	[illegible]	[illegible]
Carbon	0·4166	[illegible]	Alcohol Vapour	[illegible]	[illegible]
Steam of Water	0·481	[illegible]	Cyanogen	[illegible]	[illegible]
Sub-carburetted Hydrogen	0·5555	[illegible]	Muriatic Ether	[illegible]	[illegible]
			Sulphurous Acid	[illegible]	[illegible]
Ammonia	0·5902	[illegible]	Phosphorus	[illegible]	[illegible]
Carburetted Hydrogen	0·9722	[illegible]	Chlorine	[illegible]	[illegible]
			Sulphuric Ether Vapour	[illegible]	[illegible]
Nitrogen or Azote	0·9723	[illegible]			
Prussic Acid	0·9371	[illegible]	Nitrous Acid	[illegible]	[illegible]
Atmospheric Air	1·0000	[illegible]	Sulphuric Acid	[illegible]	[illegible]
Oxygen	1·1111	33·888	Sal Ammoniac	[illegible]	[illegible]
Sulphur	1·1111	33·888	Nitric Acid	[illegible]	[illegible]
Sulphuretted Hydrogen	1·1805	[illegible]	Hydriodic Acid	[illegible]	[illegible]
			Oil of Turpentine	[illegible]	[illegible]
Muriatic Acid	1·2840	[illegible]	Chloric Acid	[illegible]	[illegible]

New Table of Elementary Substances, with their Equivalents and Symbols.

Monads.		
Hydrogen	H = 1	$H^2 O$, water.
Fluorine	F = 19	$Ca F^2$, fluor spar.
Chlorine	Cl = 35·5	$Cl^2 O^5$, chloric acid.
Bromine	Br = 80	$Br^2 O^5$, bromic acid.
Iodine	I = 127	$I^2 O^5$, iodic acid.
Lithium	Li = 7	$Li^2 O$, lithia.
Sodium	Na = 23	$Na^2 O$, soda.
Potassium	K = 39·1	$K^2 O$, potash.
Rubidium	Rb = 85·4	
Cæsium	Cs = 133	
Thallium	Tl = 204	$Tl^2 O$, thallium oxide.
Silver	Ag = 108	$Ag Cl$, argentic chloride.
Tryads.		
Nitrogen	N = 14	$N^2 O^5$, nitric acid.
Phosphorus	P = 31	$P^2 O^5$, phosphoric acid.
Arsenic	As = 75	$As^2 O^3$, arsenious acid.
Antimony	Sb = 122	$Sb^2 O^5$, antimonic acid.
Bismuth	Bi = 210	$Bi Cl^3$, bismuth chloride.
Boron	B = 11	$B^2 O^3$, boracic acid.
Gold	Au = 197	$Au Cl^3$, auric chloride.
Vanadium	V = 137	$V O^3$, vanadic trioxide.
Dyads, Tetrads, etc.		
Oxygen	O = 16	$H^2 O$, water. [sulphuric acid.
Sulphur	S = 32	$H^2 SO^4$, hydric sulphate, or
Selenium	Se = 79·5	$Se O^2$, selenious acid.
Tellurium	Te = 129	$Te O^3$, telluric acid.
Calcium	Ca = 40	$Ca O$, lime.
Strontium	Sr = 87·5	$Sr O$, strontia.
Barium	Ba = 137	$Ba O$, baryta.
Lead	Pb = 207	$Pb O$, litharge.
Mercury	Hg = 200	$Hg^2 Cl^2$, mercurous chloride.

Dyads, Tetrads, etc.—*continued.*		
Magnesium	Mg = 24	$Mg O$, magnesia.
Zinc	Zn = 65	$Zn SO^4$, zinc sulphate.
Cadmium	Cd = 112	$Cd O$, cadmic oxide.
Indium	In = 74	
Aluminium	Al = 27·5	$Al^2 O^3$, alumina.
Iron	Fe = 56	$Fe^2 O^3$, ferric oxide.
Chromium	Cr = 52·5	$Cr O^3$, chromic acid.
Manganese	Mn = 55	$Mn^2 O^3$, manganic oxide.
Cobalt	Co = 58·5	$Co Cl^2$, cobaltous chloride.
Nickel	Ni = 58·5	$Ni O$, nickelous oxide.
Copper	Cu = 63·5	$Cu O$, cupric oxide.
Glucinum	G = 9	$G O$, glucina.
Yttrium	Y = 64	
Cerium	Ce = 92	$Ce O$, ceric oxide.
Lanthanum	La = 92	
Didymium	Di = 96	
Uranium	U = 120	$Ur^2 O^3$, uranic oxide.
Zirconium	Zr = 89·5	
Tantalum	Ta = 138	
Niobium	Nb = 195	
Thorinum	Th = 238	
Carbon	C = 12	$C O^2$, carbonic acid.
Silicon	Si = 28	$Si O^2$, silica.
Tin	Sn = 118	$Sn O^2$, stannic oxide.
Titanium	Ti = 50	
Molybdenum	Mo = 96	$M O^3$, molybdic acid.
Tungsten	W = 184	$W O^3$, tungstic acid.
Platinum	Pt = 197·5	$Pt Cl^4$, platinic chloride.
Iridium	Ir = 197	
Osmium	Os = 199	
Rhodium	Ro = 104·4	
Ruthenium	Ru = 104·4	
Palladium	Pd = 106·6	

CHEMISTRY.

Table of Elementary Substances, with their Equivalents and Symbols.

Element.	Symbol.	Equivalent Number. H = 1.	Equivalent Number. O = 100	Compounds with Oxygen, etc.
Aluminium	Al	13·75	171·87	$Al_2\,O_3$, alumina.
Antimony (Stibium)	Sb	122·	1525·	$Sb\,O_5$, antimonic acid.
Arsenicum	As	75·	937·5	$As\,O_3$, white arsenic.
Barium	Ba	68·5	856·25	$Ba\,O$, baryta.
Bismuth	Bi	210·	2625·	$Bi\,Cl_3$, chloride of bismuth.
Boron	B	10·9	136·25	$B\,O_3$, boracic acid.
Bromine	Br	80·	1000·	$Br\,O_5$, bromic acid.
Cadmium	Cd	56·	700·	$Cd\,O$, oxide of cadmium.
Calcium	Ca	20·	250·	$Ca\,O$, lime.
Carbon	C	6·	75·	$C\,O_2$, carbonic acid.
Cerium	Ce	46·	575·	$Ce_2\,O_3$, sesquioxide of cerium.
Chlorine	Cl	35·5	443·75	$Cl\,O_5$, chloric acid.
Chromium	Cr	26·3	328·75	$Cr\,O_3$, chromic acid.
Cobalt	Co	29·5	368·75	$Co\,Cl$, chloride of cobalt.
Copper (Cuprum)	Cu	31·75	396·875	$Cu\,O$, black oxide of copper.
Didymium	D	48·	600·	$Di\,O$, oxide of didymium.
Erbium	E	—	—	—
Fluorine	F	19·	237·5	$Ca\,Fl$, fluor spar.
Glucinum	Gl	4·66	58·25	$Gl\,O$, glucina.
Gold (Aurum)	Au	196·66	2458·25	Au_2Cl_3, soluble chloride of gold.
Hydrogen	H	1·	12·5	$H\,O$, water.
Ilmenium	Il	—	—	—
Iodine	I	127·	1587·5	$I\,O_5$, iodic acid.
Iridium	Ir	98·6	1232·5	$Ir\,O$, protoxide of iridium.
Iron (Ferrum)	Fe	28·	350·	$Fe_2\,O_3$, red oxide of iron.
Lantanium	La	46·	575·	$La\,O$, oxide of lantanium.
Lead (Plumbum)	Pb	103·5	1293·75	$Pb\,O$, litharge.
Lithium	L	7·	87·5	$L\,O$, lithia.
Magnesium	Mg	12·16	152·	$Mg\,O$, magnesia.
Manganese	Mn	27·5	343·75	$Mn\,O_2$, black oxide of manganese.
Mercury (Hydrargyrum)	Hg	100·	1250·	$Hg_2\,Cl$, calomel. $Hg\,Cl$, corrosive sublimate.
Molybdenum	M	48·	600·	$M\,O_3$, molybdic acid.
Nickel	Ni	29·5	368·75	$Ni\,O$, protoxide of nickel.
Niobium (Columbium)	Nb	48·8	610·	$Nb\,O_3$, niobic acid.
Nitrogen	N	14·	175·	$N\,O_5$, nitric acid.
Osmium	Os	99·5	1243·75	$Os\,O_4$, volatile oxide of osmium.
Oxygen	O	8·	100·	$H\,O$, water.
Palladium	Pd	53·24	665·50	$Pd\,O$, oxide of palladium.
Phosphorus	P	31·	387·5	$P\,O_5$, phosphoric acid.
Platinum	Pt	98·56	1232·	$Pt\,Cl_2$, bichloride of platinum.
Potassium (Kalium)	K	39·	487·5	$K\,O$, potash.
Rhodium	Ro	52·16	652·	$Na\,Cl + Ro_2\,Cl_3$, double chloride with sodium.

 ☞ See Dr. Miller's Elements of Chemistry.

CHEMISTRY.

Table of Elementary Substances, with their Equivalents and Symbols.

Element.	Symbol.	Equivalent Numbers. H = 1	O = 100	Compounds with Oxygen, etc.
Ruthenium	Ru	52·11	651·37	Ru_2Cl_3, sesquichloride of ruthenium.
Selenium	Se	39·75	496·87	SeO_3, selenic acid.
Silicon	Si	14	175	SiO_2, silica.
Silver (Argentum)	Ag	108	1350	$AgCl$, chloride of silver.
Sodium (Natrium)	Na	23	287·5	NaO, soda.
Strontium	Sr	43·75	546·87	SrO, strontia.
Sulphur	S	16	200	SO_3, sulphuric acid.
Tantalum, or Columbium	Ta	68·8	860	TaO_3, tantalic acid.
Tellurium	Te	64·5	806·25	TeO_3, telluric acid.
Terbium	Tb	—	—	
Thorinum	Th	59·5	743·75	ThO, thoria.
Tin (Stannum)	Sn	59	737·5	SnO_2, binoxide.
Titanium	Ti	25	312·5	TiO_2, titanic acid.
Tungsten (Wolfram)	W	92	1150	WO_3, tungstic acid.
Uranium	U	60	750	U_2O_3, uranic acid.
Vanadium	V	68·46	855·75	VO_3, vanadic acid.
Yttrium	Y	—	—	YO, yttria.
Zinc	Zn	32·75	409·37	ZnS, blende.
Zirconium	Zr	33·6	420	Zr_2O_3, zirconia.

Classification of Elementary Substances.

Non Metallic Elements.	Metallic Elements.			
1. Oxygen.	I. Of Alkalies.	4. Thorinum.	7. Chromium.	VI. Metals.
2. Nitrogen.	1. Potassium.	5. Yttrium.	8. Manganese.	1. Bismuth.
3. Hydrogen.	2. Sodium.	6. Erbium.		2. Copper.
4. Carbon.	3. Lithium.	7. Terbium.	V. Yielding Acids.	3. Lead.
5. Chlorine.	II. Of Alkaline Earths.	8. Cerium.	1. Tin.	VII. Noble Metals.
6. Bromine.	1. Barium.	9. Lanthanum.	2. Titanium.	1. Mercury.
7. Iodine.	2. Strontium.	10. Didymium.	3. Columbium.	2. Silver.
8. Fluorine.	3. Calcium.	IV. Analogous to Iron.	4. Niobium.	3. Gold.
9. Sulphur.	4. Magnesium.	1. Zinc.	5. Ilmenium.	4. Platinum.
10. Selenium.	III. Of the Earths.	2. Cadmium.	6. Molybdenum.	5. Palladium.
11. Phosphorus.	1. Aluminum.	3. Cobalt.	7. Tungsten.	6. Rhodium.
12. Silicon.	2. Glucinum.	4. Nickel.	8. Vanadium.	7. Ruthenium.
13. Boron.	3. Zirconium.	5. Uranium.	9. Antimony.	8. Osmium.
		6. Iron.	10. Arsenic.	9. Iridium.
			11. Tellurium.	

CHEMISTRY.

CONDUCTION OF HEAT IN METALS, &c.

Gold	1000·
Silver	973·
Copper	898·2
Platinum	381·
Iron	374·3
Zinc	363·
Tin	303·9
Lead	179·6
Marble	23·6
Porcelain	12·2
Fire-clay	11·4

SPECIFIC HEAT.

Water	1·0000
Hydrogen Gas	3·2936
Aqueous Vapour	·8470
Alcohol	·7000
Ether	·6600
Oil	·5200
Nitrogen Gas	·2754
Air	·2669
Oxygen	·2361
Carbonic Acid	·2210
Charcoal	·2631
Sulphur	·1850
Iron	·1138
Zinc	·0955
Mercury	·0332
Platinum	·0324
Gold	·0298

EXPANSION OF METALS. 32° to 212°.

Steel	0·0011899	or $\frac{1}{812}$
Silver	0·0020826	„ $\frac{1}{480}$
Copper	0·0019188	„ $\frac{1}{521}$
Iron Wire	0·0014401	„ $\frac{1}{694}$
Platina	0·00099218	„ $\frac{1}{1008}$
Palladium	0·0010000	„ $\frac{1}{1000}$

EXPANSION OF AERIFORM BODIES. — Atmospheric Air.

Temperature.	Bulk.	Temperature.	Bulk.
32°	100,000	130°	120,384
40	101,666	140	122,464
50	103,749	150	124,544
60	105,824	160	126,624
70	107,904	170	128,704
80	109,984	180	130,784
90	112,064	190	132,864
100	114,144	200	134,944
110	116,224	210	137,024
120	118,304	212	137,440

FORCE AND WEIGHT OF STEAM AT DIFFERENT TEMPERATURES.

Temperature.	Inches of Mercury.	Weight of Cubic Foot.
		Grains. Parts.
32°	0·216	2·53
40	0·280	3·23
50	0·400	4·53
60	0·560	6·22
70	0·770	8·39
80	1·060	11·33
90	1·430	15·00
212	30·000	257·218

LATENT HEAT OF VAPOURS. (Dr. Ure.)

Vapour of Water at 212°	1000·°
„ Alcohol	457·
„ Ether	312·9
„ Oil of Turpentine	183·8
„ Nitric Acid (S. G. 1·494)	550·
„ Ammonia (S. G. 0·978)	865·9
„ Vinegar (S. G. 1·007)	903·

LATENT HEAT.—(Dr. Irvine.)

Water	140·°
Sulphur	143·7
Spermaceti	145·
Lead	162·
Bees'-wax	175·
Zinc	494·
Tin	500·
Bismuth	550·

ABSORPTION OF GASES BY NEWLY BURNT CHARCOAL.

Charcoal = 1 Volume.

	Volumes.
Ammonia	90·
Muriatic Acid	85·
Sulphurous Acid	65·
Sulphuretted Hydrogen	55·
Nitrous Oxide	40·
Carbonic Acid	35·
Bi-carburetted Hydrogen	35·
Carbonic Oxide	9·4
Oxygen	9·2
Nitrogen	7·5
Carburetted Hydrogen	5·
Hydrogen	1·7

OPTICS.—POLARIZATION OF LIGHT, &c.

REFRANGIBILITY OF THE RAYS OF THE SPECTRUM.

Colours of Rays.	Water. Index of Refraction.	Crown Glass. Index of Refraction.	Flint Glass. Index of Refraction.
Red	1·3310	1·5258	1·6277
Orange	1·3317	1·5268	1·6297
Yellow	1·3336	1·5296	1·6350
Green	1·3358	1·5330	1·6420
Blue	1·3378	1·5361	1·6483
Indigo	1·3413	1·5417	1·6603
Violet	1·3442	1·5466	1·6711

REFRACTIVE POWERS OF GASES AND VAPOURS.

Bar. 30".

Air	1·000
Oxygen	0·924
Nitrogen	1·020
Hydrogen	0·470
Ammonia	1·309
Carbonic Acid	1·526
Carburetted Hydrogen	2·302
Muriatic Acid	1·527
Chlorine	2·623
Alcohol Vapour	2·220
Ether Vapour	5·280
Sulphuret of Carbon Vapour	5·179
Cyanogen	2·832
Hydrocyanic Acid	1·531
Sulphuretted Hydrogen	2·187
Carbonic Oxide	1·157

LIGHT IS POLARIZED BY REFLECTION, AT DIFFERENT ANGLES IN DIFFERENT SUBSTANCES.

	°	′	″
Air	45	0	0
Water	53	11	0
Fluor Spar	55	9	0
Obsidian	56	6	0
Sulphate of Lime	56	45	0
Crown Glass	56	55	0
Rock Crystal	56	58	0
Sulphate of Barytes	58	23	0
Topaz	58	31	0
Mother of Pearl	58	50	0
Iceland Spar	58	51	0
Spinelle Ruby	60	25	0
Zircon	63	0	0
Glass of Antimony	64	30	0
Sulphur	63	45	0
Diamond	68	1	0
Chromate of Lead	68	3	0

REFRACTIVE POWERS OF LIQUIDS AND SOLIDS.

Sulphuret of Carbon	1·678	Chromate of Lead	2·974
Tolu Balsam	1·628	Diamond	2·439
Cassia Oil	1·641	Phosphorus	2·224
Almond Oil	1·483	Calcareous Spar	1·654
Spirits of Turpentine	1·475	Quartz	1·548
Sulphuric Acid	1·434	Resin	1·549
Alcohol	1·372	Rock Salt	1·557
Ether	1·358	Ice	1·309
Water	1·335	Tabasheer	1·111

DIATHERMANCY.

Names of the interposed Substances, common thickness 0·1031 inch.
Out of 100 incident Rays,

Rock Salt	transmitted	92	Emerald	transmitted	29
Mirror Glass	„	62	Gypsum	„	20
Rock Crystal	„	62	Fluor Spar	„	[illegible]
Iceland Spar	„	62	Citric Acid	„	15
Brown Rock Crystal	„	57	Rochelle Salt	„	12
Carbonate of Lead	„	52	Alum	„	12
Sulphate of Barytes	„	33	Sulphate of Copper	„	0

The Corresponding Degrees on the Thermometer Scales of Fahrenheit, Celsus or Centigrade, and of Reaumur; with the effect of Temperature on Metals, &c., from various authorities.

Observed Effects of Temperature: On Metals, &c.		Fahrenheit.	Fahrenheit.	Celsus or Centigrade.	Reaumur.
Iron and Platinum	melt at about	3280°	3281°	1800°	1440°
Cast Iron	melts at	2786	2795	1538	1254
Gold	"	2016	2012	1100	880
Copper	"	1996	1994	1090	872
Silver	"	1873	1877	1025	820
Zinc	"	773	770	410	328
Mercury	boils at	656	653	345	276
Lead	melts at	612	608	320	256
Sulphuric Acid (Spec. Gravity 1·848)	boils at	600	599	315	252
Bismuth	melts at	476	473	245	196
Tin	"	442	446	230	184
Camphor	boils at	400	401	205	164
Oil of Turpentine	"	356	347	175	140
Volatile Oils	boil about	300	302	150	120
Cadmium	melts at	290	284	140	112
Caoutchouc	"	248	248	120	96
Water (Boiling Point)	boils at	212	212	100	80
Nitric Acid (Specific Gravity 1·500)	"	210	203	95	76
Resin	melts at	194	194	90	72
Sulphur	volatilises at	180	185	85	68
Alcohol (Sp. Grav. ·815)	boils at	176	176	80	64
Acetic Ether	"	168	167	75	60
Wax—white	melts at	155	158	70	56
Wax—yellow	"	149	149	65	52
Ammonia	boils at	140	140	60	48
Paraffine	melts at	136	131	55	44
Bisulphuret of Carbon	boils at	118	122	50	40
Phosphorus	takes fire at	100	113	45	36
Sulphuric Ether	boils at	100	104	40	32
Tallow	congeals at	92	95	35	28
Acetous Fermentation	at about	82	86	30	24
Prussic Acid	boils at	80	77	25	20
Vinous Fermentation	at about	70	68	20	16
Hydrochloric Ether	boils at	52	59	15	12
Acetic Acid	congeals at	50	50	10	8
Olive Oil	"	36	41	5	4
Water (FREEZING POINT)	"	32	32	0	0
Blood	"	21	23	− 5	− 4
Oil of Turpentine	"	14	14	−10	− 8
Prussic Acid	"	4	5	−15	−12
Brandy	"	− 7	− 4	−20	−16
			−13	−25	−20
Sulphuric Acid (Spec. Gravity 1·8064)	"	−26	−22	−30	−24
Nitric Acid (Sp. Grav. 1·407)	"	−30	−31	−35	−28
Mercury	solidifies at	−39	−40	−40	−32

LOGARITHMS.

As the INDEX to the LOGARITHM is not introduced into the TABLE, it must be prefixed in use, according to the following scale.

When the natural number is

10 and does not amount to			100, the Index 1 is prefixed.
100	,,	,,	1,000, the Index 2 is prefixed.
1,000	,,	,,	10,000, the Index 3 is prefixed.
10,000	,,	,,	100,000, the Index 4 is prefixed.
100,000	,,	,,	1,000,000, the Index 5 is prefixed, and so on.

The INDEX of the LOG. of any decimal fraction is a negative number, equal to unity added to the number of zeros immediately following the decimal point. The INDEX and LOGARITHM of ·00782 is $\bar{3}$·8932068, and the INDEX and LOG. of ·782 is $\bar{1}$·8932068.

In many calculations it affords much facility, instead of employing negative Indices, to use their complements, and + 7· and + 9· are substituted for − 3· and − 1·—At a subsequent stage, it is necessary to deduct the 10 by which the Indices have been augmented.

☞ It has been recommended by Mr. BABBAGE to place the negative sign above the Index, as the decimal part of the Log. is not negative.

The LOGARITHMS in Table XX. from **1 to 1200** are the COMMON or BRIGGS'S LOGARITHMS. It may perhaps be of use to state, that by LORD NEPER'S TABLE of NATURAL LOGARITHMS,* the LOG. of 10 is 2·3025850929940457, whereas by BRIGGS'S TABLE the LOG. of 10 is 1·00000, &c.

Therefore the LOG. of any one number of NEPER'S LOGS. ÷ by 2·302585, &c., or × by the ratio, 0·4342944819032518, &c., will give BRIGGS'S LOG. of the same number; and consequently the LOG. of any one number of BRIGGS'S LOGS. × by 2·302585, &c., will give NEPER'S LOG. of the corresponding number.

With the aid of the TABLE of LOGS. from **1 to 1200**, there is no difficulty in ascertaining the LOG. of any number less than 108000; in general, true to the 6th place, but I believe always to the 5th.

* In 1850, Mr. ZACHARIAS DASE published in Vienna a Table of NATURAL LOGARITHMS, from 1 to 10,500, carried to 7 places of decimals. In the same year he visited London, and gave some of the most wonderful proofs of his extraordinary powers of mental calculation and memory. There can be no doubt that he could mentally extract the Square Root of 100 Figures in less than one hour; and it was well authenticated that he had in Germany undertaken and succeeded in mentally obtaining the result of 100 figures multiplied by 100 figures. It is a loss to the world, that the gifted talents of such a man should not be directed to results which might be useful to science, and which are not likely to be obtained by any other means, as we have but little hope that the splendid prospect opened by Mr. BABBAGE'S Calculating Machine will ever be realized, the aid of Government having been withdrawn. Is there no chivalrous *Millionaire* of this country anxious to immortalize his name by being associated with the successful carrying out of Mr. BABBAGE'S Calculating Machine? A slice of a Million would be well bestowed to obtain such a result.

The RULE which I have found to answer is—

LOG. of **5**.

Power.	Logarithm.
1	0·6989700
2	1·3979400
3	2·0969100
4	2·7958800
5	3·4948500
6	4·1938200
7	4·8927900
8	5·5917600
9	6·2907300

1st. To divide the number, the LOG. of which is wanted, by 5, until the whole number is exhausted, and the number of divisions made will give the first portion of the answer, from the annexed small Table of the LOG. of **5**, multiplied by the figures opposite, viz. 2 to 9.

2nd. Ascertain in the TABLE of LOGS., the LOG. of the three first decimals which are left after the divisions made.

3rd. Take the difference between the LOG. last found and the LOG. of the number one greater. Multiply this difference into the (four) remaining figures and divide by 10000.

4th. These three amounts, being added together, will produce the LOG. of the given number.

E.G. Required the LOG. of 65421.

This number being divided by 5, seven times, will leave a decimal of ·8373888.

By the annexed TABLE, the division by 5, seven times, gives .	4·8927900
The LOG. of ·837 by the TABLE of LOGS. is	$\bar{1}$·9227255
And the part to be added for ·0003888 will be (as shown below)	·0002015
	4·8157170

which is the LOG. of 65421, true to the 6th place.

By the TABLE, the LOG. of ·8380000 is $\bar{1}$·9232440
And LOG. of ·8370000 is $\bar{1}$·9227255

The difference of these LOGS. is ·0005185

Multiply this difference, viz. ·0005185 by the four remaining figures, viz. 3888, and divide by 10000. The amount thus obtained is the part to be added to complete the Logarithm.

The accuracy of the above method may be thus proved.

Let 4·815717 be the given LOG. to find the corresponding number.

The given LOG. being . . .	4·815717	
By the Tables the LOG. of 65000 . . . is	4·812913	being the nearest to the given Log.
1st difference is	·002804	
By the Tables the LOG. of 1·006 . . . is	·002598	being the nearest Log. to the remainder.
2nd difference is	·000206	
And (see below) . ·000477 is the part to be added for	·000206	
1·006477		

1st Factor. 2nd Factor.
65000 × 1·006477 = 65421, the NUMBER sought.

By the Table, LOG. of 1·007 is ·003029
and LOG. of 1·006 is ·002598

Difference . . . . . . ·000431

By dividing ·000206 by ·000431, and again dividing the quotient by 1000, we obtain ·000477, which will complete the second factor.

TABLE OF LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
1	·0 000 000	51	·7 075 702	101	·0 043 214	151	·1 789 769
2	·3 010 300	52	·7 160 033	102	·0 086 002	152	·1 818 436
3	·4 771 213	53	·7 242 759	103	·0 128 372	153	·1 846 914
4	·6 020 600	54	·7 323 938	104	·0 170 333	154	·1 875 207
5	·6 989 700	55	·7 403 627	105	·0 211 893	155	·1 903 317
6	·7 781 513	56	·7 481 880	106	·0 253 059	156	·1 931 246
7	·8 450 980	57	·7 558 749	107	·0 293 838	157	·1 958 997
8	·9 030 900	58	·7 634 280	108	·0 334 238	158	·1 986 571
9	·9 542 425	59	·7 708 520	109	·0 374 265	159	·2 013 971
10	·0 000 000	**60**	·7 781 513	**110**	·0 413 927	**160**	·2 041 200
11	·0 413 927	61	·7 853 298	111	·0 453 230	161	·2 068 259
12	·0 791 812	62	·7 923 917	112	·0 492 180	162	·2 095 150
13	·1 139 431	63	·7 993 405	113	·0 530 784	163	·2 121 876
14	·1 461 280	64	·8 061 800	114	·0 569 049	164	·2 148 438
15	·1 760 913	65	·8 129 134	115	·0 606 978	165	·2 174 839
16	·2 041 200	66	·8 195 439	116	·0 644 580	166	·2 201 081
17	·2 304 489	67	·8 260 748	117	·0 681 859	167	·2 227 165
18	·2 552 725	68	·8 325 089	118	·0 718 820	168	·2 253 093
19	·2 787 536	69	·8 388 491	119	·0 755 470	169	·2 278 867
20	·3 010 300	**70**	·8 450 980	**120**	·0 791 812	**170**	·2 304 489
21	·3 222 193	71	·8 512 583	121	·0 827 854	171	·2 329 961
22	·3 424 227	72	·8 573 325	122	·0 863 598	172	·2 355 284
23	·3 617 278	73	·8 633 229	123	·0 899 051	173	·2 380 461
24	·3 802 112	74	·8 692 317	124	·0 934 217	174	·2 405 492
25	·3 979 400	75	·8 750 613	125	·0 969 100	175	·2 430 380
26	·4 149 733	76	·8 808 136	126	·1 003 705	176	·2 455 127
27	·4 313 638	77	·8 864 907	127	·1 038 037	177	·2 479 733
28	·4 471 580	78	·8 920 946	128	·1 072 100	178	·2 504 200
29	·4 623 980	79	·8 976 271	129	·1 105 897	179	·2 528 530
30	·4 771 213	**80**	·9 030 900	**130**	·1 139 434	**180**	·2 552 725
31	·4 913 617	81	·9 084 850	131	·1 172 713	181	·2 576 786
32	·5 051 500	82	·9 138 139	132	·1 205 739	182	·2 600 714
33	·5 185 139	83	·9 190 781	133	·1 238 516	183	·2 624 511
34	·5 314 789	84	·9 242 793	134	·1 271 048	184	·2 648 178
35	·5 440 680	85	·9 294 189	135	·1 303 338	185	·2 671 717
36	·5 563 025	86	·9 344 985	136	·1 335 389	186	·2 695 129
37	·5 682 017	87	·9 395 193	137	·1 367 206	187	·2 718 416
38	·5 797 836	88	·9 444 827	138	·1 398 791	188	·2 741 578
39	·5 910 646	89	·9 493 900	139	·1 430 148	189	·2 764 618
40	·6 020 600	**90**	·9 542 425	**140**	·1 461 280	**190**	·2 787 536
41	·6 127 839	91	·9 590 414	141	·1 492 191	191	·2 810 334
42	·6 232 493	92	·9 637 878	142	·1 522 883	192	·2 833 012
43	·6 334 685	93	·9 684 829	143	·1 553 360	193	·2 855 573
44	·6 434 527	94	·9 731 279	144	·1 583 625	194	·2 878 017
45	·6 532 125	95	·9 777 236	145	·1 613 680	195	·2 900 346
46	·6 627 578	96	·9 822 712	146	·1 643 529	196	·2 922 561
47	·6 720 979	97	·9 867 717	147	·1 673 173	197	·2 944 662
48	·6 812 412	98	·9 912 261	148	·1 702 617	198	·2 966 652
49	·6 901 961	99	·9 956 352	149	·1 731 863	199	·2 988 531
50	·6 989 700	**100**	·0 000 000	**150**	·1 760 913	**200**	·3 010 300

TABLE OF LOGARITHMS.

NUMBER.	LOG.	NUMBER.	LOG.	NUMBER.	LOG.	NUMBER.	LOG.
201	·3 031 961	251	·3 996 737	301	·4 785 665	351	·5 453 071
202	·3 053 514	252	·4 014 005	302	·4 800 069	352	·5 465 427
203	·3 074 960	253	·4 031 205	303	·4 814 426	353	·5 477 747
204	·3 096 302	254	·4 048 337	304	·4 828 736	354	·5 490 033
205	·3 117 539	255	·4 065 402	305	·4 842 998	355	·5 502 284
206	·3 138 672	256	·4 082 400	306	·4 857 214	356	·5 514 500
207	·3 159 703	257	·4 099 331	307	·4 871 384	357	·5 526 682
208	·3 180 633	258	·4 116 197	308	·4 885 507	358	·5 538 830
209	·3 201 463	259	·4 132 998	309	·4 899 585	359	·5 550 944
210	·3 222 193	**260**	·4 149 733	**310**	·4 913 617	**360**	·5 563 025
211	·3 242 825	261	·4 166 405	311	·4 927 604	361	·5 575 072
212	·3 263 359	262	·4 183 013	312	·4 941 546	362	·5 587 086
213	·3 283 796	263	·4 199 557	313	·4 955 443	363	·5 599 066
214	·3 304 138	264	·4 216 039	314	·4 969 296	364	·5 611 014
215	·3 324 385	265	·4 232 459	315	·4 983 106	365	·5 622 929
216	·3 344 538	266	·4 248 816	316	·4 996 871	366	·5 634 811
217	·3 364 597	267	·4 265 113	317	·5 010 593	367	·5 646 661
218	·3 384 565	268	·4 281 348	318	·5 024 271	368	·5 658 478
219	·3 404 441	269	·4 297 523	319	·5 037 907	369	·5 670 264
220	·3 424 227	**270**	·4 313 638	**320**	·5 051 500	**370**	·5 682 017
221	·3 443 923	271	·4 329 693	321	·5 065 050	371	·5 693 739
222	·3 463 530	272	·4 345 689	322	·5 078 559	372	·5 705 429
223	·3 483 049	273	·4 361 626	323	·5 092 025	373	·5 717 088
224	·3 502 480	274	·4 377 506	324	·5 105 450	374	·5 728 716
225	·3 521 825	275	·4 393 327	325	·5 118 834	375	·5 740 313
226	·3 541 084	276	·4 409 091	326	·5 132 176	376	·5 751 878
227	·3 560 259	277	·4 424 798	327	·5 145 478	377	·5 763 414
228	·3 579 348	278	·4 440 448	328	·5 158 738	378	·5 774 918
229	·3 598 355	279	·4 456 042	329	·5 171 959	379	·5 786 392
230	·3 617 278	**280**	·4 471 580	**330**	·5 185 139	**380**	·5 797 836
231	·3 636 120	281	·4 487 063	331	·5 198 280	381	·5 809 250
232	·3 654 880	282	·4 502 491	332	·5 211 381	382	·5 820 634
233	·3 673 559	283	·4 517 864	333	·5 224 442	383	·5 831 988
234	·3 692 159	284	·4 533 183	334	·5 237 465	384	·5 843 312
235	·3 710 679	285	·4 548 449	335	·5 250 448	385	·5 854 607
236	·3 729 120	286	·4 563 660	336	·5 263 393	386	·5 865 873
237	·3 747 483	287	·4 578 819	337	·5 276 299	387	·5 877 110
238	·3 765 770	288	·4 593 925	338	·5 289 167	388	·5 888 317
239	·3 783 979	289	·4 608 978	339	·5 301 997	389	·5 899 496
240	·3 802 112	**290**	·4 623 980	**340**	·5 314 789	**390**	·5 910 646
241	·3 820 170	291	·4 638 930	341	·5 327 544	391	·5 921 768
242	·3 838 154	292	·4 653 829	342	·5 340 261	392	·5 932 861
243	·3 856 063	293	·4 668 676	343	·5 352 941	393	·5 943 926
244	·3 873 898	294	·4 683 473	344	·5 365 584	394	·5 954 962
245	·3 891 661	295	·4 698 220	345	·5 378 191	395	·5 965 971
246	·3 909 351	296	·4 712 917	346	·5 390 761	396	·5 976 952
247	·3 926 970	297	·4 727 564	347	·5 403 295	397	·5 987 905
248	·3 944 517	298	·4 742 163	348	·5 415 792	398	·5 998 831
249	·3 961 993	299	·4 756 712	349	·5 428 254	399	·6 009 729
250	·3 979 400	**300**	·4 771 213	**350**	·5 440 680	**400**	·6 020 600

TABLE OF LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
401	[illegible]	451	[illegible]	501	[illegible]	551	[illegible]
402	[illegible]	452	[illegible]	502	[illegible]	552	[illegible]
403	[illegible]	453	[illegible]	503	[illegible]	553	[illegible]
404	[illegible]	454	[illegible]	504	[illegible]	554	[illegible]
405	[illegible]	455	[illegible]	505	[illegible]	555	[illegible]
406	[illegible]	456	[illegible]	506	[illegible]	556	[illegible]
407	[illegible]	457	[illegible]	507	[illegible]	557	[illegible]
408	[illegible]	458	[illegible]	508	[illegible]	558	[illegible]
409	[illegible]	459	[illegible]	509	[illegible]	559	[illegible]
410	[illegible]	**460**	[illegible]	**510**	[illegible]	**560**	[illegible]
411	[illegible]	461	[illegible]	511	[illegible]	561	[illegible]
412	[illegible]	462	[illegible]	512	[illegible]	562	[illegible]
413	[illegible]	463	[illegible]	513	[illegible]	563	[illegible]
414	[illegible]	464	[illegible]	514	[illegible]	564	[illegible]
415	[illegible]	465	[illegible]	515	[illegible]	565	[illegible]
416	[illegible]	466	[illegible]	516	[illegible]	566	[illegible]
417	[illegible]	467	[illegible]	517	[illegible]	567	[illegible]
418	[illegible]	468	[illegible]	518	[illegible]	568	[illegible]
419	[illegible]	469	[illegible]	519	[illegible]	569	[illegible]
420	[illegible]	**470**	[illegible]	**520**	[illegible]	**570**	[illegible]
421	[illegible]	471	[illegible]	521	[illegible]	571	[illegible]
422	[illegible]	472	[illegible]	522	[illegible]	572	[illegible]
423	[illegible]	473	[illegible]	523	[illegible]	573	[illegible]
424	[illegible]	474	[illegible]	524	[illegible]	574	[illegible]
425	[illegible]	475	[illegible]	525	[illegible]	575	[illegible]
426	[illegible]	476	[illegible]	526	[illegible]	576	[illegible]
427	[illegible]	477	[illegible]	527	[illegible]	577	[illegible]
428	[illegible]	478	[illegible]	528	[illegible]	578	[illegible]
429	[illegible]	479	[illegible]	529	[illegible]	579	[illegible]
430	[illegible]	**480**	[illegible]	**530**	[illegible]	**580**	[illegible]
431	[illegible]	481	[illegible]	531	[illegible]	581	[illegible]
432	[illegible]	482	[illegible]	532	[illegible]	582	[illegible]
433	[illegible]	483	[illegible]	533	[illegible]	583	[illegible]
434	[illegible]	484	[illegible]	534	[illegible]	584	[illegible]
435	[illegible]	485	[illegible]	535	[illegible]	585	[illegible]
436	[illegible]	486	[illegible]	536	[illegible]	586	[illegible]
437	[illegible]	487	[illegible]	537	[illegible]	587	[illegible]
438	[illegible]	488	[illegible]	538	[illegible]	588	[illegible]
439	[illegible]	489	[illegible]	539	[illegible]	589	[illegible]
440	[illegible]	**490**	[illegible]	**540**	[illegible]	**590**	[illegible]
441	[illegible]	491	[illegible]	541	[illegible]	591	[illegible]
442	[illegible]	492	[illegible]	542	[illegible]	592	[illegible]
443	[illegible]	493	[illegible]	543	[illegible]	593	[illegible]
444	[illegible]	494	[illegible]	544	[illegible]	594	[illegible]
445	[illegible]	495	[illegible]	545	[illegible]	595	[illegible]
446	[illegible]	496	[illegible]	546	[illegible]	596	[illegible]
447	[illegible]	497	[illegible]	547	[illegible]	597	[illegible]
448	[illegible]	498	[illegible]	548	[illegible]	598	[illegible]
449	[illegible]	499	[illegible]	549	[illegible]	599	[illegible]
450	[illegible]	**500**	[illegible]	**550**	[illegible]	**600**	[illegible]

TABLE OF LOGARITHMS.

Numbers.	Log.	Numbers.	Log.	Numbers.	Log.	Numbers.	Log.
601	[illegible]	651	[illegible]	701	[illegible]	751	·8 756 309
602	[illegible]	652	[illegible]	702	[illegible]	752	·8 762 17[illegible]
603	[illegible]	653	[illegible]	703	[illegible]	753	·8 767 950
604	[illegible]	654	[illegible]	704	[illegible]	754	·8 773 713
605	[illegible]	655	[illegible]	705	[illegible]	755	·8 779 470
606	[illegible]	656	[illegible]	706	[illegible]	756	·8 785 21[illegible]
607	[illegible]	657	[illegible]	707	[illegible]	757	·8 790 95[illegible]
608	[illegible]	658	[illegible]	708	[illegible]	758	·8 796 68[illegible]
609	[illegible]	659	[illegible]	709	[illegible]	759	·8 802 41[illegible]
610	[illegible]	**660**	[illegible]	**710**	[illegible]	**760**	·8 808 [illegible]
611	[illegible]	661	·8 202 815	711	[illegible]	761	·8 813 [illegible]
612	[illegible]	662	[illegible]	712	[illegible]	762	·8 819 [illegible]
613	[illegible]	663	[illegible]	713	[illegible]	763	·8 825 [illegible]
614	·7 881 08[illegible]	664	·8 221 581	714	[illegible]	764	·8 830 [illegible]
615	[illegible]	665	[illegible]	715	[illegible]	765	·8 836 [illegible]
616	[illegible]	666	[illegible]	716	[illegible]	766	·8 842 [illegible]
617	[illegible]	667	[illegible]	717	[illegible]	767	·8 847 [illegible]
618	[illegible]	668	[illegible]	718	[illegible]	768	·8 853 [illegible]
619	[illegible]	669	[illegible]	719	[illegible]	769	·8 859 [illegible]
620	[illegible]	**670**	[illegible]	**720**	[illegible]	**770**	·8 86[illegible]
621	[illegible]	671	[illegible]	721	[illegible]	771	·8 870 [illegible]
622	[illegible]	672	[illegible]	722	[illegible]	772	·8 876 [illegible]
623	[illegible]	673	[illegible]	723	[illegible]	773	·8 881 795
624	[illegible]	674	[illegible]	724	[illegible]	774	·8 887 [illegible]
625	[illegible]	675	[illegible]	725	[illegible]	775	·8 893 [illegible]
626	·7 965 713	676	·8 299 467	726	[illegible]	776	·8 898 61[illegible]
627	[illegible]	677	[illegible]	727	[illegible]	777	·8 90[illegible]
628	[illegible]	678	[illegible]	728	[illegible]	778	·8 909 [illegible]
629	[illegible]	679	[illegible]	729	[illegible]	779	·8 915 175
630	[illegible]	**680**	[illegible]	**730**	[illegible]	**780**	·8 920 9[illegible]
631	[illegible]	681	[illegible]	731	[illegible]	781	·8 926 [illegible]
632	[illegible]	682	[illegible]	732	[illegible]	782	·8 932 [illegible]
633	[illegible]	683	[illegible]	733	[illegible]	783	·8 937 [illegible]
634	[illegible]	684	[illegible]	734	[illegible]	784	·8 943 161
635	[illegible]	685	[illegible]	735	[illegible]	785	·8 948 [illegible]
636	[illegible]	686	·8 36[illegible]	736	[illegible]	786	·8 954 293
637	[illegible]	687	[illegible]	737	[illegible]	787	·8 959 747
638	[illegible]	688	[illegible]	738	[illegible]	788	·8 965 [illegible]
639	[illegible]	689	[illegible]	739	[illegible]	789	·8 970 [illegible]
640	[illegible]	**690**	[illegible]	**740**	[illegible]	**790**	·8 976 [illegible]
641	[illegible]	691	[illegible]	741	[illegible]	791	·8 981 [illegible]
642	[illegible]	692	[illegible]	742	[illegible]	792	·8 987 [illegible]
643	[illegible]	693	[illegible]	743	[illegible]	793	·8 992 [illegible]
644	[illegible]	694	[illegible]	744	[illegible]	794	·8 998 [illegible]
645	[illegible]	695	[illegible]	745	[illegible]	795	·9 00[illegible]
646	[illegible]	696	[illegible]	746	[illegible]	796	·9 00[illegible]
647	[illegible]	697	[illegible]	747	[illegible]	797	·9 014 [illegible]
648	[illegible]	698	[illegible]	748	[illegible]	798	·9 020 [illegible]
649	·8 122 447	699	·8 441 772	749	[illegible]	799	·9 025 [illegible]
650	[illegible]	**700**	[illegible]	**750**	[illegible]	**800**	·9 030 [illegible]

TABLE OF LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
801	·9 036 325	851	·9 299 296	901	·9 547 248	951	·9 781 805
802	·9 041 744	852	·9 304 396	902	·9 552 065	952	·9 786 369
803	·9 047 155	853	·9 309 490	903	·9 556 878	953	·9 790 929
804	·9 052 560	854	·9 314 579	904	·9 561 684	954	·9 795 484
805	·9 057 959	855	·9 319 661	905	·9 566 486	955	·9 800 034
806	·9 063 350	856	·9 324 738	906	·9 571 282	956	·9 804 579
807	·9 068 735	857	·9 329 808	907	·9 576 073	957	·9 809 119
808	·9 074 114	858	·9 334 873	908	·9 580 858	958	·9 813 655
809	·9 079 485	859	·9 339 932	909	·9 585 639	959	·9 818 186
810	·9 084 850	**860**	·9 344 985	**910**	·9 590 414	**960**	·9 822 712
811	·9 090 209	861	·9 350 032	911	·9 595 184	961	·9 827 234
812	·9 095 560	862	·9 355 073	912	·9 599 948	962	·9 831 751
813	·9 100 905	863	·9 360 108	913	·9 604 708	963	·9 836 263
814	·9 106 244	864	·9 365 137	914	·9 609 462	964	·9 840 770
815	·9 111 576	865	·9 370 161	915	·9 614 211	965	·9 845 273
816	·9 116 902	866	·9 375 179	916	·9 618 955	966	·9 849 771
817	·9 122 221	867	·9 380 191	917	·9 623 693	967	·9 854 265
818	·9 127 533	868	·9 385 197	918	·9 628 427	968	·9 858 754
819	·9 132 839	869	·9 390 198	919	·9 633 155	969	·9 863 238
820	·9 138 139	**870**	·9 395 193	**920**	·9 637 878	**970**	·9 867 717
821	·9 143 432	871	·9 400 182	921	·9 642 596	971	·9 872 192
822	·9 148 718	872	·9 405 165	922	·9 647 309	972	·9 876 663
823	·9 153 998	873	·9 410 142	923	·9 652 017	973	·9 881 128
824	·9 159 272	874	·9 415 114	924	·9 656 720	974	·9 885 590
825	·9 164 539	875	·9 420 081	925	·9 661 417	975	·9 890 046
826	·9 169 800	876	·9 425 041	926	·9 666 110	976	·9 894 498
827	·9 175 055	877	·9 429 996	927	·9 670 797	977	·9 898 946
828	·9 180 303	878	·9 434 945	928	·9 675 480	978	·9 903 389
829	·9 185 545	879	·9 439 889	929	·9 680 157	979	·9 907 827
830	·9 190 781	**880**	·9 444 827	**930**	·9 684 829	**980**	·9 912 261
831	·9 196 010	881	·9 449 759	931	·9 689 497	981	·9 916 690
832	·9 201 233	882	·9 454 686	932	·9 694 159	982	·9 921 115
833	·9 206 450	883	·9 459 607	933	·9 698 816	983	·9 925 535
834	·9 211 661	884	·9 464 523	934	·9 703 469	984	·9 929 951
835	·9 216 865	885	·9 469 433	935	·9 708 116	985	·9 934 362
836	·9 222 063	886	·9 474 337	936	·9 712 758	986	·9 938 769
837	·9 227 255	887	·9 479 236	937	·9 717 396	987	·9 943 172
838	·9 232 440	888	·9 484 130	938	·9 722 028	988	·9 947 569
839	·9 237 620	889	·9 489 018	939	·9 726 656	989	·9 951 963
840	·9 242 793	**890**	·9 493 900	**940**	·9 731 279	**990**	·9 956 352
841	·9 247 960	891	·9 498 777	941	·9 735 896	991	·9 960 737
842	·9 253 121	892	·9 503 649	942	·9 740 509	992	·9 965 117
843	·9 258 276	893	·9 508 515	943	·9 745 117	993	·9 969 492
844	·9 263 424	894	·9 513 375	944	·9 749 720	994	·9 973 864
845	·9 268 567	895	·9 518 230	945	·9 754 318	995	·9 978 231
846	·9 273 704	896	·9 523 080	946	·9 758 911	996	·9 982 593
847	·9 278 834	897	·9 527 924	947	·9 763 500	997	·9 986 952
848	·9 283 959	898	·9 532 763	948	·9 768 083	998	·9 991 305
849	·9 289 077	899	·9 537 597	949	·9 772 662	999	·9 995 655
850	·9 294 189	**900**	·9 542 425	**950**	·9 777 236	**1000**	·0 000 000

TABLE OF LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
1001	[illegible]	1051	[illegible]	1101	[illegible]	1151	[illegible]
1002	[illegible]	1052	[illegible]	1102	[illegible]	1152	[illegible]
1003	[illegible]	1053	[illegible]	1103	[illegible]	1153	[illegible]
1004	0·017 337	1054	[illegible]	1104	[illegible]	1154	[illegible]
1005	0·021 661	1055	[illegible]	1105	[illegible]	1155	[illegible]
1006	[illegible]	1056	[illegible]	1106	[illegible]	1156	[illegible]
1007	[illegible]	1057	[illegible]	1107	[illegible]	1157	[illegible]
1008	[illegible]	1058	[illegible]	1108	[illegible]	1158	[illegible]
1009	[illegible]	1059	[illegible]	1109	[illegible]	1159	[illegible]
1010	[illegible]	**1060**	[illegible]	**1110**	[illegible]	**1160**	[illegible]
1011	[illegible]	1061	[illegible]	1111	[illegible]	1161	[illegible]
1012	0·051 805	1062	[illegible]	1112	0·461 018	1162	[illegible]
1013	[illegible]	1063	[illegible]	1113	[illegible]	1163	[illegible]
1014	[illegible]	1064	[illegible]	1114	[illegible]	1164	[illegible]
1015	[illegible]	1065	[illegible]	1115	[illegible]	1165	[illegible]
1016	[illegible]	1066	[illegible]	1116	[illegible]	1166	[illegible]
1017	[illegible]	1067	[illegible]	1117	[illegible]	1167	[illegible]
1018	[illegible]	1068	[illegible]	1118	[illegible]	1168	[illegible]
1019	[illegible]	1069	[illegible]	1119	[illegible]	1169	[illegible]
1020	[illegible]	**1070**	[illegible]	**1120**	[illegible]	**1170**	0·681 859
1021	[illegible]	1071	[illegible]	1121	[illegible]	1171	[illegible]
1022	[illegible]	1072	[illegible]	1122	[illegible]	1172	[illegible]
1023	[illegible]	1073	[illegible]	1123	[illegible]	1173	[illegible]
1024	[illegible]	1074	[illegible]	1124	[illegible]	1174	[illegible]
1025	[illegible]	1075	[illegible]	1125	[illegible]	1175	[illegible]
1026	[illegible]	1076	[illegible]	1126	[illegible]	1176	0·704 073
1027	[illegible]	1077	[illegible]	1127	[illegible]	1177	[illegible]
1028	[illegible]	1078	[illegible]	1128	[illegible]	1178	[illegible]
1029	[illegible]	1079	[illegible]	1129	[illegible]	1179	[illegible]
1030	[illegible]	**1080**	[illegible]	**1130**	0·530 781	**1180**	0·718 820
1031	[illegible]	1081	[illegible]	1131	[illegible]	1181	[illegible]
1032	[illegible]	1082	[illegible]	1132	[illegible]	1182	[illegible]
1033	[illegible]	1083	[illegible]	1133	[illegible]	1183	[illegible]
1034	[illegible]	1084	[illegible]	1134	[illegible]	1184	[illegible]
1035	[illegible]	1085	[illegible]	1135	[illegible]	1185	[illegible]
1036	[illegible]	1086	[illegible]	1136	[illegible]	1186	[illegible]
1037	[illegible]	1087	[illegible]	1137	[illegible]	1187	[illegible]
1038	[illegible]	1088	[illegible]	1138	[illegible]	1188	[illegible]
1039	[illegible]	1089	[illegible]	1139	[illegible]	1189	[illegible]
1040	[illegible]	**1090**	[illegible]	**1140**	[illegible]	**1190**	[illegible]
1041	[illegible]	1091	[illegible]	1141	[illegible]	1191	[illegible]
1042	[illegible]	1092	[illegible]	1142	[illegible]	1192	[illegible]
1043	[illegible]	1093	[illegible]	1143	[illegible]	1193	[illegible]
1044	[illegible]	1094	[illegible]	1144	[illegible]	1194	[illegible]
1045	[illegible]	1095	[illegible]	1145	[illegible]	1195	[illegible]
1046	0·195 317	1096	[illegible]	1146	[illegible]	1196	[illegible]
1047	[illegible]	1097	[illegible]	1147	[illegible]	1197	[illegible]
1048	[illegible]	1098	[illegible]	1148	[illegible]	1198	[illegible]
1049	[illegible]	1099	[illegible]	1149	[illegible]	1199	[illegible]
1050	[illegible]	**1100**	[illegible]	**1150**	[illegible]	**1200**	0·791 812

Logs. useful in working Questions of Compound Interest for long periods of time.

£1 with Interest for One Year.	Decimal Part of Logarithm.	Rate per Cent. in which the Log. is used	£1 with Interest for One Year.	Decimal Part of Logarithm.	Rate per Cent. in which the Log. is used
£. 1·0025	·0 010 843 813	¼	£. 1·0325	·0 138 900 603	3¼
1·0050	·0 021 660 618	½	1·0350	·0 149 403 498	3½
1·0075	·0 032 450 548	¾	1·0375	·0 159 881 054	3¾
1·0100	·0 043 213 738	1	1·0400	·0 170 333 393	4
1·0125	·0 053 950 319	1¼	1·0425	·0 180 760 636	4¼
1·0150	·0 064 660 422	1½	1·0450	·0 191 162 904	4½
1·0175	·0 075 344 179	1¾	1·0475	·0 201 540 336	4¾
1·0200	·0 086 001 718	2	1·0500	·0 211 892 991	5
1·0225	·0 096 633 167	2¼	1·0525	·0 222 221 045	5¼
1·0250	·0 107 238 654	2½	1·0550	·0 232 524 596	5½
1·0275	·0 117 818 305	2¾	1·0575	·0 242 803 760	5¾
1·0300	·0 128 372 247	3	1·0600	·0 253 058 653	6

The Log. of the Rate per Cent. × by the time + the Log. of the amount, will give the Log. of the amount or amounts to which the money will have accumulated at Compound Interest in the given period.

MISCELLANEOUS RULES.

Length of an Arc	= No. of Deg. × Rad. × ·01745329251994329.
Circumference of Circle	= Diameter × 3·14159265358979323846264.
Area of Circle*	= Diameter² × ·7853981633974483096156.
Ellipse Area	= T. Axis × C. Axis × ·7853981, &c.
Spheroid Cube	= Rev. Axis² × f. Axis × ·5235987, &c.
Sphere Surface	= Diameter² × 3·14159, &c.
„ Cube	= Diameter³ × ·5235987755982988730771.
Parabola Area	= ⅔rds of Base × Height.
Paraboloid Cube	= ½ Base × Height.
Cone and Pyr. Sur.	= ½ girt of Base × slant Height.
„ „ Cube	= Area of Base × ⅓ Height.
Area of any Triangle	= ½ Base × Altitude.
Area of any Parallelogram . . .	= Base × Altitude.
Solid contents of any Cube . . .	= Length × Breadth × Height.

 * See Note (No. 8) on approximate Geometrical Quadrature of Circle.

SQUARES, CUBES, ROOTS, RECIPROCALS,

&c.

SQUARES, CUBES, ROOTS, AND RECIPROCALS.

NUMBER.	SQUARE.	CUBE.	SQUARE ROOT.	CUBE ROOT.	RECIPROCAL.
1	1	1	1·0 000 000	1·0 000 000	1·000 000 000
2	4	8	1·4 142 136	1·2 599 210	0·500 000 000
3	9	27	1·7 320 508	1·4 422 496	·333 333 333
4	16	64	2·0 000 000	1·5 874 011	·250 000 000
5	25	125	2·2 360 680	1·7 099 759	·200 000 000
6	36	216	2·4 494 897	1·8 171 206	·166 666 667
7	49	343	2·6 457 513	1·9 129 312	·142 857 143
8	64	512	2·8 284 271	2·0 000 000	·125 000 000
9	81	729	3·0 000 000	2·0 800 837	·111 111 111
10	100	1 000	3·1 622 777	2·1 544 347	·100 000 000
11	121	1 331	3·3 166 248	2·2 239 801	·090 909 091
12	144	1 728	3·4 641 016	2·2 894 286	·083 333 333
13	169	2 197	3·6 055 513	2·3 513 347	·076 923 077
14	196	2 744	3·7 416 574	2·4 101 422	·071 428 571
15	225	3 375	3·8 729 833	2·4 662 121	·066 666 667
16	256	4 096	4·0 000 000	2·5 198 421	·062 500 000
17	289	4 913	4·1 231 056	2·5 712 816	·058 823 529
18	324	5 832	4·2 426 407	2·6 207 414	·055 555 556
19	361	6 859	4·3 588 989	2·6 684 016	·052 631 579
20	400	8 000	4·4 721 360	2·7 144 177	·050 000 000
21	441	9 261	4·5 825 757	2·7 589 243	·047 619 048
22	484	10 648	4·6 904 158	2·8 020 393	·045 454 545
23	529	12 167	4·7 958 315	2·8 438 670	·043 478 261
24	576	13 824	4·8 989 795	2·8 844 991	·041 666 667
25	625	15 625	5·0 000 000	2·9 240 177	·040 000 000
26	676	17 576	5·0 990 195	2·9 624 960	·038 461 538
27	729	19 683	5·1 961 524	3·0 000 000	·037 037 037
28	784	21 952	5·2 915 026	3·0 365 889	·035 714 286
29	841	24 389	5·3 851 648	3·0 723 168	·034 482 759
30	900	27 000	5·4 772 256	3·1 072 325	·033 333 333
31	961	29 791	5·5 677 644	3·1 413 806	·032 258 065
32	1 024	32 768	5·6 568 542	3·1 748 021	·031 250 000
33	1 089	35 937	5·7 445 626	3·2 075 343	·030 303 030
34	1 156	39 304	5·8 309 519	3·2 396 118	·029 411 765
35	1 225	42 875	5·9 160 798	3·2 710 663	·028 571 429
36	1 296	46 656	6·0 000 000	3·3 019 272	·027 777 778
37	1 369	50 653	6·0 827 625	3·3 322 218	·027 027 027
38	1 444	54 872	6·1 644 140	3·3 619 754	·026 315 789
39	1 521	59 319	6·2 449 980	3·3 912 114	·025 641 026
40	1 600	64 000	6·3 245 553	3·4 199 519	·025 000 000
41	1 681	68 921	6·4 031 242	3·4 482 172	·024 390 244
42	1 764	74 088	6·4 807 407	3·4 760 266	·023 809 524
43	1 849	79 507	6·5 574 385	3·5 033 981	·023 255 814
44	1 936	85 184	6·6 332 496	3·5 303 483	·022 727 273
45	2 025	91 125	6·7 082 039	3·5 568 933	·022 222 222
46	2 116	97 336	6·7 823 300	3·5 830 479	·021 739 130
47	2 209	103 823	6·8 556 546	3·6 088 261	·021 276 600
48	2 304	110 592	6·9 282 032	3·6 342 411	·020 833 333
49	2 401	117 649	7·0 000 000	3·6 593 057	·020 408 163
50	2 500	125 000	7·0 710 678	3·6 840 314	·020 000 000

SQUARES, CUBES, ROOTS, AND RECIPROCALS.

Num-bers.	Square.	Cube.	Square Root.	Cube Root.	Reciprocal.
51	2 601	132 651	7·1 414 284	3·7 084 298	0·019 607 843
52	2 704	140 608	7·2 111 026	3·7 325 111	[illegible]
53	2 809	[illegible]	7·2 801 099	3·7 562 858	[illegible]
54	2 916	157 464	7·3 484 692	3·7 797 631	[illegible]
55	3 025	166 375	7·4 161 985	3·8 029 525	[illegible]
56	3 136	175 616	7·4 833 148	3·8 258 624	[illegible]
57	[illegible]	185 193	[illegible]	[illegible]	[illegible]
58	[illegible]	195 112	[illegible]	[illegible]	[illegible]
59	[illegible]	205 379	[illegible]	[illegible]	[illegible]
60	[illegible]	216 000	[illegible]	[illegible]	[illegible]
61	[illegible]	226 981	[illegible]	[illegible]	[illegible]
62	[illegible]	238 328	[illegible]	[illegible]	[illegible]
63	[illegible]	250 047	[illegible]	[illegible]	[illegible]
64	[illegible]	262 144	8·0 000 000	4·0 000 000	·015 625 000
65	[illegible]	274 625	[illegible]	[illegible]	[illegible]
66	[illegible]	287 496	[illegible]	[illegible]	[illegible]
67	[illegible]	300 763	[illegible]	[illegible]	[illegible]
68	[illegible]	314 432	[illegible]	[illegible]	[illegible]
69	4 761	328 509	[illegible]	[illegible]	[illegible]
70	4 900	343 000	[illegible]	[illegible]	[illegible]
71	5 041	357 911	[illegible]	[illegible]	[illegible]
72	5 184	373 248	[illegible]	[illegible]	[illegible]
73	5 329	389 017	[illegible]	[illegible]	[illegible]
74	5 476	405 224	[illegible]	[illegible]	[illegible]
75	5 625	421 875	[illegible]	[illegible]	[illegible]
76	5 776	438 976	[illegible]	[illegible]	[illegible]
77	[illegible]	456 533	[illegible]	[illegible]	[illegible]
78	[illegible]	474 552	[illegible]	[illegible]	[illegible]
79	6 241	493 039	[illegible]	[illegible]	[illegible]
80	6 400	512 000	[illegible]	[illegible]	·012 500 000
81	6 561	531 441	9·0 000 000	[illegible]	[illegible]
82	6 724	551 368	[illegible]	[illegible]	[illegible]
83	6 889	571 787	[illegible]	[illegible]	[illegible]
84	7 056	592 704	[illegible]	[illegible]	[illegible]
85	7 225	614 125	[illegible]	[illegible]	[illegible]
86	7 396	636 056	[illegible]	[illegible]	[illegible]
87	7 569	658 503	[illegible]	[illegible]	[illegible]
88	7 744	681 472	[illegible]	[illegible]	[illegible]
89	7 921	704 969	[illegible]	[illegible]	[illegible]
90	8 100	729 000	[illegible]	[illegible]	[illegible]
91	8 281	753 571	[illegible]	[illegible]	[illegible]
92	8 464	778 688	[illegible]	[illegible]	[illegible]
93	8 649	804 357	[illegible]	[illegible]	[illegible]
94	8 836	830 584	[illegible]	[illegible]	[illegible]
95	9 025	[illegible]	9·7 467 943	[illegible]	[illegible]
96	9 216	884 736	[illegible]	[illegible]	[illegible]
97	9 409	912 673	[illegible]	[illegible]	[illegible]
98	9 604	941 192	[illegible]	4·6 104 363	[illegible]
99	9 801	970 299	[illegible]	4·6 260 650	[illegible]
100	10 000	1 000 000	10·0 000 000	4·6 415 888	·010 000 000

SQUARES, CUBES, ROOTS, AND RECIPROCALS.

Number.	Square.	Cube.	Square Root.	Cube Root.	Reciprocal.
101	10 201	1 030 301	10·0 498 756	4·6 570 095	0·009 900 990
102	10 404	1 061 208	10·0 995 049	4·6 723 287	·009 803 922
103	10 609	1 092 727	10·1 488 916	4·6 875 482	·009 708 738
104	10 816	1 124 864	10·1 980 390	4·7 026 694	·009 615 385
105	11 025	1 157 625	10·2 469 508	4·7 176 940	·009 523 810
106	11 236	1 191 016	10·2 956 301	4·7 326 235	·009 433 962
107	11 449	1 225 043	10·3 440 804	4·7 474 594	·009 345 794
108	11 664	1 259 712	10·3 923 048	4·7 622 032	·009 259 259
109	11 881	1 295 029	10·4 403 065	4·7 768 562	·009 174 312
110	12 100	1 331 000	10·4 880 885	4·7 914 199	·009 090 909
111	12 321	1 367 631	10·5 356 538	4·8 058 955	·009 009 009
112	12 544	1 404 928	10·5 830 052	4·8 202 845	·008 928 571
113	12 769	1 442 897	10·6 301 458	4·8 345 881	·008 849 558
114	12 996	1 481 544	10·6 770 783	4·8 488 076	·008 771 930
115	13 225	1 520 875	10·7 238 053	4·8 629 442	·008 695 652
116	13 456	1 560 896	10·7 703 296	4·8 769 990	·008 620 690
117	13 689	1 601 613	10·8 166 538	4·8 909 732	·008 547 009
118	13 924	1 643 032	10·8 627 805	4·9 048 681	·008 474 576
119	14 161	1 685 159	10·9 087 121	4·9 186 847	·008 403 361
120	14 400	1 728 000	10·9 544 512	4·9 324 242	·008 333 333
121	14 641	1 771 561	11·0 000 000	4·9 460 874	·008 264 463
122	14 884	1 815 848	11·0 453 610	4·9 596 757	·008 196 721
123	15 129	1 860 867	11·0 905 365	4·9 731 898	·008 130 081
124	15 376	1 906 624	11·1 355 287	4·9 866 310	·008 064 516
125	15 625	1 953 125	11·1 803 399	5·0 000 000	·008 000 000
126	15 876	2 000 376	11·2 249 722	5·0 132 979	·007 936 508
127	16 129	2 048 383	11·2 694 277	5·0 265 257	·007 874 016
128	16 384	2 097 152	11·3 137 085	5·0 396 842	·007 812 500
129	16 641	2 146 689	11·3 578 167	5·0 527 743	·007 751 938
130	16 900	2 197 000	11·4 017 543	5·0 657 970	·007 692 308
131	17 161	2 248 091	11·4 455 231	5·0 787 531	·007 633 588
132	17 424	2 299 968	11·4 891 253	5·0 916 434	·007 575 758
133	17 689	2 352 637	11·5 325 626	5·1 044 687	·007 518 797
134	17 956	2 406 104	11·5 758 369	5·1 172 299	·007 462 687
135	18 225	2 460 375	11·6 189 500	5·1 299 278	·007 407 407
136	18 496	2 515 456	11·6 619 038	5·1 425 632	·007 352 941
137	18 769	2 571 353	11·7 046 999	5·1 551 367	·007 299 270
138	19 044	2 628 072	11·7 473 401	5·1 676 493	·007 246 377
139	19 321	2 685 619	11·7 898 261	5·1 801 015	·007 194 245
140	19 600	2 744 000	11·8 321 596	5·1 924 941	·007 142 857
141	19 881	2 803 221	11·8 743 422	5·2 048 279	·007 092 199
142	20 164	2 863 288	11·9 163 753	5·2 171 034	·007 042 254
143	20 449	2 924 207	11·9 582 607	5·2 293 215	·006 993 007
144	20 736	2 985 984	12·0 000 000	5·2 414 828	.006 944 444
145	21 025	3 048 625	12·0 415 946	5·2 535 879	·006 896 552
146	21 316	3 112 136	12·0 830 460	5·2 656 374	·006 849 315
147	21 609	3 176 523	12·1 243 557	5·2 776 321	·006 802 721
148	21 904	3 241 792	12·1 655 251	5·2 895 725	·006 756 757
149	22 201	3 307 949	12·2 065 556	5·3 014 592	·006 711 409
150	22 500	3 375 000	12·2 474 487	5·3 132 928	·006 666 667

SQUARES, CUBES, ROOTS, AND RECIPROCALS.

Number.	Square.	Cube.	Square Root.	Cube Root.	Reciprocal.
151	22 801	3 442 951	12·2882057	5·3250740	0·006 622 517
152	23 104	3 511 808	12·3288280	5·3368033	·006 578 947
153	23 409	3 581 577	12·3693169	5·3484812	·006 535 948
154	23 716	3 652 264	12·4096736	5·3601084	·006 493 506
155	24 025	3 723 875	12·4498996	5·3716854	·006 451 613
156	24 336	3 796 416	12·4899960	5·3832126	·006 410 256
157	24 649	3 869 893	12·5299641	5·3946907	·006 369 427
158	24 964	3 944 312	12·5698051	5·4061202	·006 329 114
159	25 281	4 019 679	12·6095202	5·4175015	·006 289 308
160	25 600	4 096 000	12·6491106	5·4288352	·006 250 000
161	25 921	4 173 281	12·6885775	5·4401218	·006 211 180
162	26 244	4 251 528	12·7279221	5·4513618	·006 172 840
163	26 569	4 330 747	12·7671453	5·4625556	·006 134 969
164	26 896	4 410 944	12·8062485	5·4737037	·006 097 561
165	27 225	4 492 125	12·8452326	5·4848066	·006 060 606
166	27 556	4 574 296	12·8840987	5·4958647	·006 024 096
167	27 889	4 657 463	12·9228480	5·5068784	·005 988 024
168	28 224	4 741 632	12·9614814	5·5178484	·005 952 381
169	28 561	4 826 809	13·0000000	5·5287748	·005 917 160
170	28 900	4 913 000	13·0384048	5·5396583	·005 882 353
171	29 241	5 000 211	13·0766968	5·5504991	·005 847 953
172	29 584	5 088 448	13·1148770	5·5612978	·005 813 953
173	29 929	5 177 717	13·1529464	5·5720546	·005 780 347
174	30 276	5 268 024	13·1909060	5·5827702	·005 747 126
175	30 625	5 359 375	13·2287566	5·5934447	·005 714 286
176	30 976	5 451 776	13·2664992	5·6040787	·005 681 818
177	31 329	5 545 233	13·3041347	5·6146724	·005 649 718
178	31 684	5 639 752	13·3416641	5·6252263	·005 617 978
179	32 041	5 735 339	13·3790882	5·6357408	·005 586 592
180	32 400	5 832 000	13·4164079	5·6462162	·005 555 556
181	32 761	5 929 741	13·4536240	5·6566528	·005 524 862
182	33 124	6 028 568	13·4907376	5·6670511	·005 494 505
183	33 489	6 128 487	13·5277493	5·6774114	·005 464 481
184	33 856	6 229 504	13·5646600	5·6877340	·005 434 783
185	34 225	6 331 625	13·6014705	5·6980192	·005 405 405
186	34 596	6 434 856	13·6381817	5·7082675	·005 376 344
187	34 969	6 539 203	13·6747943	5·7184791	·005 347 594
188	35 344	6 644 672	13·7113092	5·7286543	·005 319 149
189	35 721	6 751 269	13·7477271	5·7387936	·005 291 005
190	36 100	6 859 000	13·7840488	5·7488971	·005 263 158
191	36 481	6 967 871	13·8202750	5·7589652	·005 235 602
192	36 864	7 077 888	13·8564065	5·7689982	·005 208 333
193	37 249	7 189 057	13·8924440	5·7789966	·005 181 347
194	37 636	7 301 384	13·9283883	5·7889604	·005 154 639
195	38 025	7 414 875	13·9642400	5·7988900	·005 128 205
196	38 416	7 529 536	14·0000000	5·8087857	·005 102 041
197	38 809	7 645 373	14·0356688	5·8186479	·005 076 142
198	39 204	7 762 392	14·0712473	5·8284767	·005 050 505
199	39 601	7 880 599	14·1067360	5·8382725	·005 025 126
200	40 000	8 000 000	14·1421356	5·8480355	·005 000 000

SQUARES, CUBES, ROOTS, AND RECIPROCALS.

Number.	Square.	Cube.	Square Root.	Cube Root.	Reciprocal.
201	40 401	8 120 601	14·1 774 469	5·8 577 660	·004 975 124
202	40 804	8 242 408	14·2 126 704	5·8 674 643	·004 950 495
203	41 209	8 365 427	14·2 478 068	5·8 771 307	·004 926 108
204	41 616	8 489 664	14·2 828 569	5·8 867 653	·004 901 961
205	42 025	8 615 125	14·3 178 211	5·8 963 685	·004 878 049
206	42 436	8 741 816	14·3 527 001	5·9 059 406	·004 854 369
207	42 849	8 869 743	14·3 874 946	5·9 154 817	·004 830 918
208	43 264	8 998 912	14·4 222 051	5·9 249 921	·004 807 692
209	43 681	9 129 329	14·4 568 323	5·9 344 721	·004 784 689
210	44 100	9 261 000	14·4 913 767	5·9 439 220	·004 761 905
211	44 521	9 393 931	14·5 258 390	5·9 533 418	·004 739 336
212	44 944	9 528 128	14·5 602 198	5·9 627 320	·004 716 981
213	45 369	9 663 597	14·5 945 195	5·9 720 926	·004 694 836
214	45 796	9 800 344	14·6 287 388	5·9 814 240	·004 672 897
215	46 225	9 938 375	14·6 628 783	5·9 907 264	·004 651 163
216	46 656	10 077 696	14·6 969 385	6·0 000 000	·004 629 630
217	47 089	10 218 313	14·7 309 199	6·0 092 450	·004 608 295
218	47 524	10 360 232	14·7 648 231	6·0 184 617	·004 587 156
219	47 961	10 503 459	14·7 986 486	6·0 276 502	·004 566 210
220	48 400	10 648 000	14·8 323 970	6·0 368 107	·004 545 455
221	48 841	10 793 861	14·8 660 687	6·0 459 436	·004 524 887
222	49 284	10 941 048	14·8 996 644	6·0 550 489	·004 504 505
223	49 729	11 089 567	14·9 331 845	6·0 641 270	·004 484 305
224	50 176	11 239 424	14·9 666 295	6·0 731 779	·004 464 286
225	50 625	11 390 625	15·0 000 000	6·0 822 020	·004 444 444
226	51 076	11 543 176	15·0 332 964	6·0 911 993	·004 424 779
227	51 529	11 697 083	15·0 665 192	6·1 001 702	·004 405 286
228	51 984	11 852 352	15·0 996 689	6·1 091 147	·004 385 965
229	52 441	12 008 989	15·1 327 460	6·1 180 332	·004 366 812
230	52 900	12 167 000	15·1 657 509	6·1 269 257	·004 347 826
231	53 361	12 326 391	15·1 986 842	6·1 357 924	·004 329 004
232	53 824	12 487 168	15·2 315 462	6·1 446 337	·004 310 345
233	54 289	12 649 337	15·2 643 375	6·1 534 495	·004 291 845
234	54 756	12 812 904	15·2 970 585	6·1 622 401	·004 273 504
235	55 225	12 977 875	15·3 297 097	6·1 710 058	·004 255 319
236	55 696	13 144 256	15·3 622 915	6·1 797 466	·004 237 288
237	56 169	13 312 053	15·3 948 043	6·1 884 628	·004 219 409
238	56 644	13 481 272	15·4 272 486	6·1 971 544	·004 201 681
239	57 121	13 651 919	15·4 596 248	6·2 058 218	·004 184 100
240	57 600	13 824 000	15·4 919 334	6·2 144 650	·004 166 667
241	58 081	13 997 521	15·5 241 747	6·2 230 843	·004 149 378
242	58 564	14 172 488	15·5 563 492	6·2 316 797	·004 132 231
243	59 049	14 348 907	15·5 884 573	6·2 402 515	·004 115 226
244	59 536	14 526 784	15·6 204 994	6·2 487 998	·004 098 361
245	60 025	14 706 125	15·6 524 758	6·2 573 247	·004 081 633
246	60 516	14 886 936	15·6 843 871	6·2 658 266	·004 065 041
247	61 009	15 069 223	15·7 162 336	6·2 743 054	·004 048 583
248	61 504	15 252 992	15·7 480 157	6·2 827 613	·004 032 258
249	62 001	15 438 249	15·7 797 338	6·2 911 946	·004 016 064
250	62 500	15 625 000	15·8 113 883	6·2 996 052	·004 000 000

SQUARES, CUBES, ROOTS, AND RECIPROCALS.

Number.	Square.	Cube.	Square Root.	Cube Root.	Reciprocal.
251	63 001	15 813 251	15·8 429 795	6·3 079 935	0·003 984 064
252	63 504	16 003 008	15·8 745 079	6·3 163 596	·003 968 254
253	64 009	16 194 277	15·9 059 737	6·3 247 035	·003 952 569
254	64 516	16 387 064	15·9 373 775	6·3 330 256	·003 937 008
255	65 025	16 581 375	15·9 687 194	6·3 413 257	·003 921 569
256	65 536	16 777 216	16·0 000 000	6·3 496 042	·003 906 250
257	66 049	16 974 593	16·0 312 195	6·3 578 611	·003 891 051
258	66 564	17 173 512	16·0 623 784	6·3 660 968	·003 875 969
259	67 081	17 373 979	16·0 934 769	6·3 743 111	·003 861 004
260	67 600	17 576 000	16·1 245 155	6·3 825 043	·003 846 154
261	68 121	17 779 581	16·1 554 944	6·3 906 765	·003 831 418
262	68 644	17 984 728	16·1 864 141	6·3 988 279	·003 816 794
263	69 169	18 191 447	16·2 172 747	6·4 069 585	·003 802 281
264	69 696	18 399 744	16·2 480 768	6·4 150 687	·003 787 879
265	70 225	18 609 625	16·2 788 206	6·4 231 583	·003 773 585
266	70 756	18 821 096	16·3 095 064	6·4 312 276	·003 759 398
267	71 289	19 034 163	16·3 401 346	6·4 392 767	·003 745 318
268	71 824	19 248 832	16·3 707 055	6·4 473 057	·003 731 343
269	72 361	19 465 109	16·4 012 195	6·4 553 148	·003 717 472
270	72 900	19 683 000	16·4 316 767	6·4 633 041	·003 703 704
271	73 441	19 902 511	16·4 620 776	6·4 712 736	·003 690 037
272	73 984	20 123 648	16·4 924 225	6·4 792 236	·003 676 471
273	74 529	20 346 417	16·5 227 116	6·4 871 541	·003 663 004
274	75 076	20 570 824	16·5 529 454	6·4 950 653	·003 649 635
275	75 625	20 796 875	16·5 831 240	6·5 029 572	·003 636 364
276	76 176	21 024 576	16·6 132 477	6·5 108 300	·003 623 188
277	76 729	21 253 933	16·6 433 170	6·5 186 839	·003 610 108
278	77 284	21 484 952	16·6 733 320	6·5 265 189	·003 597 122
279	77 841	21 717 639	16·7 032 931	6·5 343 351	·003 584 229
280	78 400	21 952 000	16·7 332 005	6·5 421 326	·003 571 429
281	78 961	22 188 041	16·7 630 546	6·5 499 116	·003 558 719
282	79 524	22 425 768	16·7 928 556	6·5 576 722	·003 546 099
283	80 089	22 665 187	16·8 226 038	6·5 654 144	·003 533 569
284	80 656	22 906 304	16·8 522 995	6·5 731 385	·003 521 127
285	81 225	23 149 125	16·8 819 430	6·5 808 443	·003 508 772
286	81 796	23 393 656	16·9 115 345	6·5 885 323	·003 496 503
287	82 369	23 639 903	16·9 410 743	6·5 962 023	·003 484 321
288	82 944	23 887 872	16·9 705 627	6·6 038 545	·003 472 222
289	83 521	24 137 569	17·0 000 000	6·6 114 890	·003 460 208
290	84 100	24 389 000	17·0 293 864	6·6 191 060	·003 448 276
291	84 681	24 642 171	17·0 587 221	6·6 267 054	·003 436 426
292	85 264	24 897 088	17·0 880 075	6·6 342 874	·003 421 658
293	85 849	25 153 757	17·1 172 428	6·6 418 522	·003 412 969
294	86 436	25 412 184	17·1 464 282	6·6 493 998	·003 401 361
295	87 025	25 672 375	17·1 755 640	6·6 569 302	·003 389 831
296	87 616	25 934 336	17·2 046 505	6·6 644 437	·003 378 378
297	88 209	26 198 073	17·2 336 879	6·6 719 403	·003 367 003
298	88 804	26 463 592	17·2 626 765	6·6 794 200	·003 355 705
299	89 401	26 730 899	17·2 916 165	6·6 868 831	·003 344 482
300	90 000	27 000 000	17·3 205 081	6·6 943 295	·003 333 333

SQUARES, CUBES, ROOTS, AND RECIPROCALS.

Number.	Square.	Cube.	Square Root.	Cube Root.	Reciprocal.
301	90 601	27 270 901	17·3 493 516	6·7 017 593	0·003 322 259
302	91 204	27 543 608	17·3 781 472	6·7 091 729	·003 311 258
303	91 809	27 818 127	17·4 068 952	6·7 165 700	·003 300 330
304	92 416	28 094 464	17·4 355 958	6·7 239 508	·003 289 474
305	93 025	28 372 625	17·4 642 492	6·7 313 155	·003 278 689
306	93 636	28 652 616	17·4 928 557	6·7 386 641	·003 267 974
307	94 249	28 934 443	17·5 214 155	6·7 459 967	·003 257 329
308	94 864	29 218 112	17·5 499 288	6·7 533 134	·003 246 753
309	95 481	29 503 629	17·5 783 958	6·7 606 143	·003 236 246
310	96 100	29 791 000	17·6 068 169	6·7 678 995	·003 225 806
311	96 721	30 080 231	17·6 351 921	6·7 751 690	·003 215 434
312	97 344	30 371 328	17·6 635 217	6·7 824 229	·003 205 128
313	97 969	30 664 297	17·6 918 060	6·7 896 613	·003 194 888
314	98 596	30 959 144	17·7 200 451	6·7 968 844	·003 184 713
315	99 225	31 255 875	17·7 482 393	6·8 040 921	·003 174 603
316	99 856	31 554 496	17·7 763 888	6·8 112 847	·003 164 557
317	100 489	31 855 013	17·8 044 938	6·8 184 620	·003 154 574
318	101 124	32 157 432	17·8 325 545	6·8 256 242	·003 144 654
319	101 761	32 461 759	17·8 605 711	6·8 327 714	·003 134 796
320	102 400	32 768 000	17·8 885 438	6·8 399 037	·003 125 000
321	103 041	33 076 161	17·9 164 729	6·8 470 213	·003 115 265
322	103 684	33 386 248	17·9 443 584	6·8 541 240	·003 105 590
323	104 329	33 698 267	17·9 722 008	6·8 612 120	·003 095 975
324	104 976	34 012 224	18·0 000 000	6·8 682 855	·003 086 420
325	105 625	34 328 125	18·0 277 564	6·8 753 443	·003 076 923
326	106 276	34 645 976	18·0 554 701	6·8 823 888	·003 067 485
327	106 929	34 965 783	18·0 831 413	6·8 894 188	·003 058 104
328	107 584	35 287 552	18·1 107 703	6.8 964 345	·003 048 780
329	108 241	35 611 289	18·1 383 571	6·9 034 359	·003 039 514
330	108 900	35 937 000	18·1 659 021	6·9 104 232	·003 030 303
331	109 561	36 264 691	18·1 934 054	6·9 173 964	·003 021 148
332	110 224	36 594 368	18·2 208 672	6·9 243 556	·003 012 048
333	110 889	36 926 037	18·2 482 876	6·9 313 008	·003 003 003
334	111 556	37 259 704	18·2 756 669	6·9 382 321	·002 994 012
335	112 225	37 595 375	18·3 030 052	6·9 451 496	·002 985 075
336	112 896	37 933 056	18·3 303 028	6·9 520 533	·002 976 190
337	113 569	38 272 753	18·3 575 598	6·9 589 434	·002 967 359
338	114 244	38 614 472	18·3 847 763	6·9 658 198	·002 958 580
339	114 921	38 958 219	18·4 119 526	6·9 726 826	·002 949 853
340	115 600	39 304 000	18·4 390 889	6·9 795 321	·002 941 176
341	116 281	39 651 821	18·4 661 853	6·9 863 681	·002 932 551
342	116 964	40 001 688	18·4 932 420	6·9 931 906	·002 923 977
343	117 649	40 353 607	18·5 202 592	7·0 000 000	·002 915 452

CONSTANTS.

		Logarithm.	Compl. of Logarithm.
Diam. = 1. Circumference = π =	3·1 415 927	0·4 971 499	9·5 028 501
Diam. = 1. Area of Circle* = $\frac{\pi}{4}$ =	0·7 853 982	9·8 950 899	0·1 049 101
Diam. = 1. Contents of Sphere = $\frac{\pi}{6}$ =	0·5 235 988	9·7 189 986	0·2 810 014
Area = 1. Diam. of Circle = $\sqrt{\frac{4}{\pi}}$ =	1·1 283 792	0·0 524 551	9·9 475 449
Cont. = 1. Diam. of Sphere = $\sqrt[3]{\frac{6}{\pi}}$ =	1·2 407 010	0·0 936 671	9·9 063 329
$\sqrt[3]{\pi}$ =	1·4 645 919	0·1 657 166	9·8 342 834
$\sqrt{\pi}$ =	1·7 724 539	0·2 485 750	9·7 514 250
π^2 =	9·8 696 044	0·9 942 997	9·0 057 003
Hyp. Log. π =	1·1 447 299	0·0 587 030	9·9 412 970
Length of Arc 1″ = Sin 1″ =	0·000 004 848	4·6 855 749	5·3 144 251
Length of Arc 2″ = Sin 2″ =	0·000 009 696	4·9 866 049	5·0 133 951
Length of Arc 3″ = Sin 3″ =	0·000 014 544	5·1 626 961	4·8 373 039
Length of Arc 1′ = Sin 1′ =	0·000 290 888	6·4 637 261	3·5 362 739
Length of Arc 1° =	0·017 453 293	8·2 418 774	1·7 581 226
Sin 1° =	0·017 452 406	8·2 418 553	1·7 581 447
360 Degrees expressed in Seconds =	1 296 000	6·1 126 050	3·8 873 950
Rad. reduced to Seconds =	206 264·8	5·3 144 251	4·6 855 749
Rad. reduced to Minutes =	3 437·746 77	3·5 362 739	6·4 637 261
Rad. reduced to Degrees =	57·295 78	1·7 581 226	8·2 418 774
Number whose Hyp. Log. is Unity = e =	2·718 281 829	0·4 342 945	9·5 657 055
Modulus of Common Logarithms =	·434 294 482	9·6 377 843	0·3 622 156
French Toise = in Mètres	1·949 040	0·2 898 200	9·7 101 800
,, do. = ,, English Yards	2·131 530 8	0·3 286 916	9·6 713 084
,, do. = ,, ,, Feet	6·394 592 5	0·8 058 129	9·1 841 871
,, Mètre = ,, ,, Yards	1·093 633 1	0·0 388 716	9·9 611 284
,, do. = ,, ,, Feet	3·280 899 2	0·5 159 929	9·4 840 071
,, do. = ,, ,, Inches	39·370 79	1·5 951 741	8·4 048 259
,, Foot = ,, ,, Feet	1·065 765 4	0·0 276 616	9·9 723 384
,, Are = ,, ,, Acres	0·024 711 43	8·3 928 979	1·6 071 021
,, Gramme = ,, Imp[l]. ℔s. Troy	0·002 680 98	7·4 282 928	2·5 717 072
,, do. = ,, Imp[l]. ℔s. Avoird.	0·002 206 06	7·3 436 173	2·6 563 827
,, Kilogramme = ,, English Cwts.	0·019 696 9	8·2 943 993	1·7 056 007
,, Litre = ,, Imperial Gallons	0·220 096 87	9·3 426 139	0·6 573 861
Cent[l]. Degree = in Sex[l]. Degrees	0·9	9·9 542 425	0·0 457 575
Cent[l]. Minute = in Sex[l]. Minutes	0·54	9·7 323 938	0·2 676 062
Cent[l]. Second = in Sex[l]. Seconds	0·324	9·5 105 450	0·4 894 550

* See Note (No. 4) on approximate Geometrical Quadrature of Circle.

CONSTANTS—*continued.*

		Logarithm.	Compl. of Logarithm.
24 Hours expressed in Seconds . . . =	86 400	4·9 365 137	5·0 634 863
Di[l]. ac. of Stars = 3′ 55″·9093 . . . in mean Solar Seconds =	235·90 93	2·3 727 451	7·6 272 549
Sid[l]. Day = 23[h] 56′ 4″·09 . . . in mean Solar Days =	·99 726 967	9·9 988 126	0·0 011 874
Solar mean Day = 24[h] 3′ 56″·5554 . in Sidereal Days =	1·00 273 791	0·0 011 874	9·9 988 126
Sid. revolution of the Earth . . . . in mean Solar Days =	365·25 636	2·5 625 978	7·4 374 022
Trop[l]. revolution of the Earth . . . in mean Solar Days =	365·24 224	2·5 625 810	7·4 374 190
Mean circumference of the Earth . . in English Miles =	24 856	4·3 954 312	5·6 045 688
Mean Diameter of the Earth . . . in English Miles =	7 921	3·8 987 800	6·1 012 200
Earth's Equatorial Radius . . . . in English Feet =	20 921 665	7·3 205 962	2·6 794 038
Earth's Polar Radius . . . . . . in English Feet =	20 852 394	7·3 191 559	2·6 808 441
Equatorial Degree of Latitude . . . in English Feet =	362 732	5·5 595 859	4·4 404 141
Degree in Latitude 45° . . . . . . in English Feet =	364 543·5	5·5 617 494	4·4 382 506
Degree in Latitude 52° 50′ . . . . in English Feet =	365 000	5·5 622 929	4·4 377 071
Geographical Mile in Latitude 50½° . . in Statute Miles =	1·152	0·0 614 525	9·9 385 475
Sea League in Latitude 50½° . . . in Statute Miles =	3·456	0·5 385 737	9·4 614 263
Length of Pendulum which vibrates Seconds . . . . at the Equator in English Inches =	39·013 26	1·5 912 122	8·4 087 878
Do. at Latitude 45° do. =	39·118 20	1·5 923 788	8·4 076 212
Do. at Greenwich do. =	39·139 3	1·5 926 130	8·4 073 870
Do. at Edinburgh do. =	39·155 5	1·5 927 928	8·4 072 072
Force of Gravity at Greenwich . . . in Feet per Second =	32·190 8	1·5 077 318	8·4 922 682
Do. do. in Inches per Second =	386·289 4	2·5 869 128	7·4 130 872
Do. at Edinburgh in Feet per Second =	32·204 1	1·5 079 112	8·4 920 888
Bar. 30 In. F. Ther. 62°			
Cubic Inch of Distilled Water in Grains =	252·458	2·4 021 891	7·5 978 109
Cubic Foot of do. in Ounces Troy . =	908·848 800	2·9 584 916	7·0 415 084
Do. do. in Pounds Troy . =	75·737 400	1·8 793 101	8·1 206 896
Do. do. in Oz. Avoirdupois =	997·136 969 1	2·9 987 548	7·0 012 452
Do. do. in lbs. Avoirdupois =	62·321 060 6	1·7 946 348	8·2 053 652
Bar. 30 In. Ther. 55°			
English Cubic In. of Water in English Grains =	253·175	2·4 034 208	7·5 965 792
Do. Ft. of Water in do. =	437489·4	5·6 409 675	4·3 590 325
Do. Ft. of Water in Paris Grains =	533247·	5·7 269 284	4·2 730 716
Paris Cubic Foot of Water in do. =	645511·	5·8 099 037	4·1 900 963
Do. Foot of Water in English Grains =	529922·	5·7 242 119	4·2 757 881

☞ As a Cubic Foot of Water weighs *very nearly* 1000 Ounces Avoirdupois, the Specific Gravity of Bodies expresses the ounces in a Cubic Foot of them, the Density of Water being 1000.

ADDITIONAL TABLES.

NATURAL OR HYPERBOLIC LOGARITHMS.

TRIGONOMETRY.

ASTRONOMY,

&c. &c. &c.

NATURAL or HYPERBOLIC LOGARITHMS.

HYPERBOLIC LOGARITHMS are the same as those discovered by NAPIER,* or NEPER—and are sometimes called NEPERIAN as well as NATURAL Logarithms; having 1 for their Modulus; 2·302585092994, &c. for the LOG. of 10; and 1· for the LOG. of 2·718281828459, &c.

KEPLER considers Logarithms to be measures of ratios or proportions.

I have proposed (see page 108) a New Method of ascertaining the COMMON or BRIGGS'S LOGARITHM of any number less than 108000, with the aid of a TABLE of LOGS. from 1 to 1200. A similar method may be applied with equal success to HYPERBOLIC or NATURAL LOGARITHMS.

Mode of obtaining the HYPERBOLIC or NATURAL LOGARITHM of any number (within certain limits) true to the fifth place.

RULE I. Divide the number, the LOG. of which is wanted, by 10, until within the Table of LOGS. which extends from 1 to 1200. The number of divisions made, or places the decimal point is removed to the left, will give the first portion of the answer, from the annexed Table of the Powers of the Log. of 10.

II. Find the LOG. of the whole number in the quotient, left after the division made.

III. Take the difference between the LOG. of the number last found and the LOG. of a number one greater. Multiply the difference into the decimal portion of the quotient and reserve the first seven figures.

IV. These three amounts being added together will produce the LOG. of the given number.

E. G. Required the LOG. of 625679.

This number being divided by 10, three times, becomes 625·679.

By the annexed TABLE, the division by 10, three times, gives .	6·9077553
The LOG. of 625 by the TABLE of LOGS. is	6·4377516
And the part to be added for ·679 will be (as shown below) . .	·0010856
	13·3465925

which is the LOG. of 625679, true to the 6th place.

By the TABLE the LOG. of 626 is 6·4393504
and the LOG. of 625 is 6·4377516

The difference of these LOGS. is ·0015988

Multiply this difference, viz. ·0015988 by ·679, the amount will be ·0010855852.

The amount of the first 7 places is the part to be added to complete the Logarithm.

* First published in 1614 by JOHN NAPIER, Baron of MERCHISTON in Scotland, in his work entitled '*Mirifici Logarithmorum Canonis Descriptio*.'

Log. of **10**.

Power.	Logarithm.	
1	2·302 5851	$=10$
2	4·605 1702	$=10^2=100$
3	6·907 7553	$=10^3=1{,}000$
4	9·210 3404	$=10^4=10{,}000$
5	11·512 9255	$=10^5=100{,}000$
6	13·815 5106	$=10^6=1{,}000{,}000$
7	16·118 0957	$=10^7=10{,}000{,}000$
8	18·420 6807	$=10^8=100{,}000{,}000$
9	20·723 2658	$=10^9=1{,}000{,}000{,}000$
10	23·025 8509	$=10^{10}=10{,}000{,}000{,}000$, or Ten Thousand Millions.

The accuracy of the foregoing method may be thus proved.

Let 13·346592 be the given Log. to find the corresponding number.

The given Log. being . . . 13·346592
By the Table $10^3=1000$ . . . is 6·907755

1st difference is 6·438837
By the Table the Log. of 625· is 6·437751 being the nearest Log. to the difference in the Table.

2nd difference is ·001086
And (see below) . . ·679 is the part to be added for } ·001086

625·679

1st Factor. 2nd Factor.
1000 × 625·679 = 625679, the NUMBER sought.

By the Table the Log. of 626 is 6·439350
and the Log. of 625 is 6·437751

·001599

By dividing ·001086 by ·001599, we obtain ·679, which will complete the second factor.

The following TABLES will be found useful in transposing the COMMON LOG. into the NATURAL LOG. or the reverse.—See page 108.

1	023 025 851
2	046 051 702
3	069 077 553
4	092 103 404
5	115 129 255
6	138 155 106
7	161 180 957
8	184 206 807
9	207 232 658

1	0434 2945
2	0868 5890
3	1302 8834
4	1737 1779
5	2171 4724
6	2605 7669
7	3040 0614
8	3474 3559
9	3908 6503

NATURAL OR HYPERBOLIC LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
1	0·000 0000	51	3·931 8256	101	4·615 1205	151	5·017 2798
2	0·693 1472	52	3·951 2437	102	4·624 9728	152	5·023 8805
3	1·098 6123	53	3·970 2919	103	4·634 7290	153	5·030 4379
4	1·386 2944	54	3·988 9840	104	4·644 3909	154	5·036 9526
5	1·609 4379	55	4·007 3332	105	4·653 9604	155	5·043 4251
6	1·791 7595	56	4·025 3517	106	4·663 4391	156	5·049 8560
7	1·945 9101	57	4·043 0513	107	4·672 8288	157	5·056 2458
8	2·079 4415	58	4·060 4430	108	4·682 1312	158	5·062 5950
9	2·197 2246	59	4·077 5374	109	4·691 3479	159	5·068 9042
10	2·302 5851	**60**	4·094 3446	**110**	4·700 4804	**160**	5·075 1738
11	2·397 8953	61	4·110 8739	111	4·709 5302	161	5·081 4044
12	2·484 9066	62	4·127 1344	112	4·718 4989	162	5·087 5963
13	2·564 9494	63	4·143 1347	113	4·727 3878	163	5·093 7502
14	2·639 0573	64	4·158 8831	114	4·736 1984	164	5·099 8664
15	2·708 0502	65	4·174 3873	115	4·744 9321	165	5·105 9455
16	2·772 5887	66	4·189 6547	116	4·753 5902	166	5·111 9878
17	2·833 2133	67	4·204 6926	117	4·762 1739	167	5·117 9938
18	2·890 3718	68	4·219 5077	118	4·770 6846	168	5·123 9640
19	2·944 4390	69	4·234 1065	119	4·779 1235	169	5·129 8987
20	2·995 7323	**70**	4·248 4952	**120**	4·787 4917	**170**	5·135 7984
21	3·044 5224	71	4·262 6799	121	4·795 7905	171	5·141 6636
22	3·091 0425	72	4·276 6661	122	4·804 0210	172	5·147 4945
23	3·135 4942	73	4·290 4594	123	4·812 1844	173	5·153 2916
24	3·178 0538	74	4·304 0651	124	4·820 2816	174	5·159 0553
25	3·218 8758	75	4·317 4881	125	4·828 3137	175	5·164 7860
26	3·258 0965	76	4·330 7333	126	4·836 2819	176	5·170 4840
27	3·295 8369	77	4·343 8054	127	4·844 1871	177	5·176 1497
28	3·332 2045	78	4·356 7088	128	4·852 0303	178	5·181 7836
29	3·367 2958	79	4·369 4479	129	4·859 8124	179	5·187 3858
30	3·401 1974	**80**	4·382 0266	**130**	4·867 5345	**180**	5·192 9569
31	3·433 9872	81	4·394 4492	131	4·875 1973	181	5·198 4970
32	3·465 7359	82	4·406 7192	132	4·882 8019	182	5·204 0067
33	3·496 5076	83	4·418 8406	133	4·890 3491	183	5·209 4862
34	3·526 3605	84	4·430 8168	134	4·897 8398	184	5·214 9358
35	3·555 3481	85	4·442 6513	135	4·905 2748	185	5·220 3558
36	3·583 5189	86	4·454 3473	136	4·912 6549	186	5·225 7467
37	3·610 9179	87	4·465 9081	137	4·919 9809	187	5·231 1086
38	3·637 5862	88	4·477 3368	138	4·927 2537	188	5·236 4420
39	3·663 5616	89	4·488 6364	139	4·934 4739	189	5·241 7470
40	3·688 8795	**90**	4·499 8097	**140**	4·941 6424	**190**	5·247 0241
41	3·713 5721	91	4·510 8595	141	4·948 7599	191	5·252 2734
42	3·737 6696	92	4·521 7886	142	4·955 8271	192	5·257 4954
43	3·761 2001	93	4·532 5995	143	4·962 8446	193	5·262 6902
44	3·784 1896	94	4·543 2948	144	4·969 8133	194	5·267 8582
45	3·806 6625	95	4·553 8769	145	4·976 7337	195	5·272 9996
46	3·828 6414	96	4·564 3482	146	4·983 6066	196	5·278 1147
47	3·850 1476	97	4·574 7110	147	4·990 4326	197	5·283 2037
48	3·871 2010	98	4·584 9675	148	4·997 2123	198	5·288 2670
49	3·891 8203	99	4·595 1199	149	5·003 9463	199	5·293 3048
50	3·912 0230	**100**	4·605 1702	**150**	5·010 6353	**200**	5·298 3174

NATURAL or HYPERBOLIC LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
201	5·303 3049	251	5·525 4529	301	5·707 1103	351	5·860 7862
202	5·308 2677	252	5·529 4291	302	5·710 4270	352	5·863 6312
203	5·313 2060	253	5·533 3895	303	5·713 7328	353	5·866 4681
204	5·318 1200	254	5·537 3343	304	5·717 0277	354	5·869 2969
205	5·323 0100	255	5·541 2635	305	5·720 3118	355	5·872 1178
206	5·327 8762	256	5·545 1774	306	5·723 5851	356	5·874 9307
207	5·332 7188	257	5·549 0761	307	5·726 8477	357	5·877 7358
208	5·337 5381	258	5·552 9596	308	5·730 0998	358	5·880 5330
209	5·342 3343	259	5·556 8281	309	5·733 3413	359	5·883 3224
210	5·347 1075	**260**	5·560 6816	**310**	5·736 5723	**360**	5·886 1040
211	5·351 8581	261	5·564 5204	311	5·739 7929	361	5·888 8780
212	5·356 5863	262	5·568 3445	312	5·743 0032	362	5·891 6442
213	5·361 2922	263	5·572 1540	313	5·746 2032	363	5·894 4028
214	5·365 9760	264	5·575 9491	314	5·749 3930	364	5·897 1539
215	5·370 6380	265	5·579 7298	315	5·752 5726	365	5·899 8974
216	5·375 2784	266	5·583 4963	316	5·755 7422	366	5·902 6333
217	5·379 8974	267	5·587 2487	317	5·758 9018	367	5·905 3618
218	5·384 4951	268	5·590 9870	318	5·762 0514	368	5·908 0829
219	5·389 0717	269	5·594 7114	319	5·765 1911	369	5·910 7966
220	5·393 6275	**270**	5·598 4220	**320**	5·768 3210	**370**	5·913 5030
221	5·398 1627	271	5·602 1188	321	5·771 4411	371	5·916 2021
222	5·402 6774	272	5·605 8021	322	5·774 5515	372	5·918 8939
223	5·407 1718	273	5·609 4718	323	5·777 6523	373	5·921 5784
224	5·411 6461	274	5·613 1281	324	5·780 7435	374	5·924 2558
225	5·416 1004	275	5·616 7711	325	5·783 8252	375	5·926 9260
226	5·420 5350	276	5·620 4009	326	5·786 8974	376	5·929 5891
227	5·424 9500	277	5·624 0175	327	5·789 9602	377	5·932 2452
228	5·429 3456	278	5·627 6211	328	5·793 0136	378	5·934 8942
229	5·433 7220	279	5·631 2118	329	5·796 0578	379	5·937 5362
230	5·438 0793	**280**	5·634 7896	**330**	5·799 0927	**380**	5·940 1713
231	5·442 4177	281	5·638 3547	331	5·802 1184	381	5·942 7994
232	5·446 7374	282	5·641 9071	332	5·805 1350	382	5·945 4206
233	5·451 0385	283	5·645 4469	333	5·808 1425	383	5·948 0350
234	5·455 3211	284	5·648 9742	334	5·811 1410	384	5·950 6426
235	5·459 5855	285	5·652 4892	335	5·814 1305	385	5·953 2433
236	5·463 8318	286	5·655 9918	336	5·817 1112	386	5·955 8374
237	5·468 0601	287	5·659 4822	337	5·820 0829	387	5·958 4247
238	5·472 2707	288	5·662 9605	338	5·823 0459	388	5·961 0053
239	5·476 4636	289	5·666 4267	339	5·826 0001	389	5·963 5793
240	5·480 6389	**290**	5·669 8809	**340**	5·828 9456	**390**	5·966 1467
241	5·484 7969	291	5·673 3233	341	5·831 8825	391	5·968 7076
242	5·488 9377	292	5·676 7538	342	5·834 8107	392	5·971 2618
243	5·493 0614	293	5·680 1726	343	5·837 7304	393	5·973 8096
244	5·497 1682	294	5·683 5798	344	5·840 6417	394	5·976 3509
245	5·501 2582	295	5·686 9754	345	5·843 5444	395	5·978 8858
246	5·505 3315	296	5·690 3595	346	5·846 4388	396	5·981 4142
247	5·509 3883	297	5·693 7321	347	5·849 3218	397	5·983 9363
248	5·513 4287	298	5·697 0935	348	5·852 2025	398	5·986 4520
249	5·517 4529	299	5·700 4436	349	5·855 0719	399	5·988 9614
250	5·521 4609	**300**	5·703 7825	**350**	5·857 9332	**400**	5·991 4645

NATURAL OR HYPERBOLIC LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
401	5·993 9614	451	6·111 4673	501	6·216 6061	551	6·311 7348
402	5·996 4521	452	6·113 6822	502	6·218 6001	552	6·313 5480
403	5·998 9366	453	6·115 8921	503	6·220 5902	553	6·315 3580
404	6·001 4149	454	6·118 0972	504	6·222 5763	554	6·317 1647
405	6·003 8871	455	6·120 2974	505	6·224 5584	555	6·318 9681
406	6·006 3532	456	6·122 4928	506	6·226 5367	556	6·320 7683
407	6·008 8132	457	6·124 6834	507	6·228 5110	557	6·322 5652
408	6·011 2672	458	6·126 8692	508	6·230 4814	558	6·324 3590
409	6·013 7152	459	6·129 0502	509	6·232 4480	559	6·326 1495
410	6·016 1572	**460**	6·131 2265	**510**	6·234 4107	**560**	6·327 9368
411	6·018 5932	461	6·133 3980	511	6·236 3696	561	6·329 7209
412	6·021 0233	462	6·135 5649	512	6·238 3246	562	6·331 5018
413	6·023 4476	463	6·137 7271	513	6·240 2758	563	6·333 2796
414	6·025 8660	464	6·139 8846	514	6·242 2233	564	6·335 0543
415	6·028 2785	465	6·142 0374	515	6·244 1669	565	6·336 8257
416	6·030 6853	466	6·144 1856	516	6·246 1068	566	6·338 5941
417	6·033 0862	467	6·146 3293	517	6·248 0429	567	6·340 3593
418	6·035 4814	468	6·148 4683	518	6·249 9752	568	6·342 1214
419	6·037 8709	469	6·150 6028	519	6·251 9039	569	6·343 8804
420	6·040 2547	**470**	6·152 7327	**520**	6·253 8288	**570**	6·345 6364
421	6·042 6323	471	6·154 8581	521	6·255 7500	571	6·347 3892
422	6·045 0053	472	6·156 9790	522	6·257 6676	572	6·349 1390
423	6·047 3722	473	6·159 0954	523	6·259 5815	573	6·350 8857
424	6·049 7335	474	6·161 2073	524	6·261 4917	574	6·352 6294
425	6·052 0892	475	6·163 3148	525	6·263 3983	575	6·354 3700
426	6·054 4393	476	6·165 4179	526	6·265 3012	576	6·356 1077
427	6·056 7840	477	6·167 5165	527	6·267 2005	577	6·357 8423
428	6·059 1232	478	6·169 6107	528	6·269 0963	578	6·359 5739
429	6·061 4569	479	6·171 7006	529	6·270 9884	579	6·361 3025
430	6·063 7852	**480**	6·173 7861	**530**	6·272 8770	**580**	6·363 0281
431	6·066 1081	481	6·175 8673	531	6·274 7620	581	6·364 7508
432	6·068 4256	482	6·177 9441	532	6·276 6435	582	6·366 4704
433	6·070 7377	483	6·180 0167	533	6·278 5214	583	6·368 1872
434	6·073 0445	484	6·182 0849	534	6·280 3958	584	6·369 9010
435	6·075 3460	485	6·184 1489	535	6·282 2667	585	6·371 6118
436	6·077 6422	486	6·186 2086	536	6·284 1342	586	6·373 3198
437	6·079 9332	487	6·188 2641	537	6·285 9981	587	6·375 0248
438	6·082 2189	488	6·190 3154	538	6·287 8586	588	6·376 7269
439	6·084 4994	489	6·192 3625	539	6·289 7156	589	6·378 4262
440	6·086 7747	**490**	6·194 4054	**540**	6·291 5691	**590**	6·380 1225
441	6·089 0449	491	6·196 4441	541	6·293 4193	591	6·381 8160
442	6·091 3099	492	6·198 4787	542	6·295 2660	592	6·383 5066
443	6·093 5698	493	6·200 5092	543	6·297 1093	593	6·385 1944
444	6·095 8246	494	6·202 5355	544	6·298 9492	594	6·386 8793
445	6·098 0743	495	6·204 5578	545	6·300 7858	595	6·388 5614
446	6·100 3190	496	6·206 5759	546	6·302 6190	596	6·390 2407
447	6·102 5586	497	6·208 5900	547	6·304 4488	597	6·391 9171
448	6·104 7932	498	6·210 6001	548	6·306 2753	598	6·393 5908
449	6·107 0229	499	6·212 6061	549	6·308 0984	599	6·395 2616
450	6·109 2476	**500**	6·214 6081	**550**	6·309 9183	**600**	6·396 9297

NATURAL or HYPERBOLIC LOGARITHMS.

Num-ber.	Log.	Num-ber.	Log.	Num-ber.	Log.	Num-ber.	Log.
601	[illegible]	651	[illegible]	701	[illegible] 5079	751	6·621 [illegible]
602	[illegible]	652	[illegible]	702	[illegible] 9331	752	6·623 [illegible]
603	[illegible]	653	[illegible]	703	[illegible] 3569	753	6·624 [illegible]
604	[illegible]	654	[illegible]	704	[illegible] 7784	754	6·625 [illegible]
605	[illegible]	655	[illegible]	705	[illegible] 1978	755	6·626 [illegible]
606	[illegible]	656	[illegible]	706	[illegible] 6132	756	6·628 [illegible]
607	[illegible]	657	[illegible]	707	[illegible] 0307	757	6·629 [illegible]
608	[illegible]	658	[illegible]	708	[illegible] 4441	758	6·630 [illegible]
609	[illegible]	659	[illegible]	709	[illegible] 8555	759	6·632 [illegible]
610	[illegible]	660	[illegible]	710	[illegible] 2650	760	6·633 3181
611	[illegible]	661	[illegible]	711	[illegible] 6724	761	6·634 6331
612	[illegible]	662	[illegible]	712	[illegible] 0779	762	6·635 9466
613	[illegible]	663	[illegible]	713	[illegible] 4814	763	6·637 2580
614	[illegible]	664	[illegible]	714	[illegible] 8830	764	6·638 [illegible]
615	[illegible]	665	[illegible]	715	[illegible] 2825	765	6·639 8758
616	[illegible]	666	[illegible]	716	[illegible] 6803	766	6·641 1822
617	[illegible]	667	[illegible]	717	[illegible] 0758	767	6·642 4868
618	[illegible]	668	[illegible]	718	[illegible] 4696	768	6·643 [illegible]
619	[illegible]	669	[illegible]	719	[illegible] 8614	769	6·645 [illegible]
620	[illegible]	670	[illegible]	720	[illegible] 2512	770	6·646 3905
621	[illegible]	671	[illegible]	721	[illegible] 6391	771	6·647 6894
622	[illegible]	672	[illegible]	722	[illegible] 0251	772	6·648 [illegible]
623	[illegible]	673	[illegible]	723	[illegible] 4092	773	6·650 2790
624	[illegible]	674	[illegible]	724	[illegible] 7916	774	6·651 5719
625	[illegible]	675	[illegible]	725	[illegible] 1717	775	6·652 8630
626	[illegible]	676	[illegible]	726	[illegible] 5500	776	6·654 1525
627	[illegible]	677	[illegible]	727	[illegible] 9265	777	6·655 4404
628	[illegible]	678	[illegible]	728	[illegible] 3010	778	6·656 7265
629	[illegible]	679	6·520 6211	729	[illegible] 6737	779	6·658 0110
630	[illegible]	680	[illegible]	730	[illegible] 0445	780	6·659 2939
631	[illegible]	681	[illegible]	731	[illegible] 4135	781	6·660 5751
632	[illegible]	682	[illegible]	732	[illegible] 7806	782	6·661 8547
633	[illegible]	683	[illegible]	733	[illegible] 1457	783	6·663 1327
634	[illegible]	684	[illegible]	734	[illegible] 5090	784	6·664 4090
635	[illegible]	685	[illegible]	735	[illegible] 8705	785	6·665 6837
636	[illegible]	686	[illegible]	736	[illegible] 2301	786	6·666 9568
637	[illegible]	687	[illegible]	737	[illegible] 5879	787	6·668 2282
638	[illegible]	688	[illegible]	738	[illegible] 9438	788	6·669 4981
639	[illegible]	689	6·534 2413	739	[illegible] 2979	789	6·670 7663
640	[illegible]	690	[illegible]	740	[illegible] 6502	790	6·672 [illegible]
641	[illegible]	691	[illegible]	741	[illegible] 0006	791	6·673 [illegible]
642	[illegible]	692	[illegible]	742	[illegible] 3492	792	6·674 5614
643	[illegible]	693	[illegible]	743	[illegible] 6960	793	6·675 8232
644	[illegible]	694	[illegible]	744	[illegible] 0410	794	6·677 0835
645	[illegible]	695	[illegible]	745	[illegible] 3842	795	6·678 3421
646	[illegible]	696	6·545 3107	746	[illegible] 7256	796	6·679 5992
647	[illegible]	697	[illegible]	747	[illegible] 0652	797	6·680 8547
648	[illegible]	698	[illegible]	748	[illegible] 4030	798	6·682 1086
649	[illegible]	699	[illegible]	749	[illegible] 7390	799	6·683 3609
650	[illegible]	700	6·551 0803	750	[illegible] 0732	800	6·684 6117

NATURAL OR HYPERBOLIC LOGARITHMS.

Number.	Log.	Number.	Log.	Number.	Log.	Number.	Log.
801	6·685 8609	851	6·746 4121	901	6·803 5053	951	6·857 5141
802	6·687 1086	852	6·747 5865	902	6·804 6145	952	6·858 5650
803	6·688 3547	853	6·748 7595	903	6·805 7226	953	6·859 6149
804	6·689 5993	854	6·749 9312	904	6·806 8294	954	6·860 6637
805	6·690 8423	855	6·751 1015	905	6·807 9349	955	6·861 7113
806	6·692 0837	856	6·752 2704	906	6·809 0393	956	6·862 7579
807	6·693 3237	857	6·753 4379	907	6·810 1425	957	6·863 8034
808	6·694 5621	858	6·754 6041	908	6·811 2444	958	6·864 8478
809	6·695 7989	859	6·755 7689	909	6·812 3451	959	6·865 8911
810	6·697 0342	**860**	6·756 9324	**910**	6·813 4446	**960**	6·866 9333
811	6·698 2681	861	6·758 0945	911	6·814 5429	961	6·867 9744
812	6·699 5003	862	6·759 2553	912	6·815 6400	962	6·869 0145
813	6·700 7311	863	6·760 4147	913	6·816 7359	963	6·870 0534
814	6·701 9604	864	6·761 5728	914	6·817 8306	964	6·871 0913
815	6·703 1881	865	6·762 7295	915	6·818 9241	965	6·872 1281
816	6·704 4144	866	6·763 8849	916	6·820 0164	966	6·873 1638
817	6·705 6391	867	6·765 0390	917	6·821 1075	967	6·874 1985
818	6·706 8623	868	6·766 1917	918	6·822 1974	968	6·875 2321
819	6·708 0841	869	6·767 3431	919	6·823 2861	969	6·876 2646
820	6·709 3043	**870**	6·768 4932	**920**	6·824 3737	**970**	6·877 2961
821	6·710 5231	871	6·769 6420	921	6·825 4600	971	6·878 3265
822	6·711 7404	872	6·770 7894	922	6·826 5452	972	6·879 3558
823	6·712 9562	873	6·771 9356	923	6·827 6292	973	6·880 3841
824	6·714 1705	874	6·773 0804	924	6·828 7121	974	6·881 4113
825	6·715 3834	875	6·774 2239	925	6·829 7937	975	6·882 4375
826	6·716 5948	876	6·775 3661	926	6·830 8742	976	6·883 4626
827	6·717 8047	877	6·776 5070	927	6·831 9536	977	6·884 4867
828	6·719 0132	878	6·777 6466	928	6·833 0317	978	6·885 5097
829	6·720 2202	879	6·778 7849	929	6·834 1087	979	6·886 5316
830	6·721 4257	**880**	6·779 9219	**930**	6·835 1846	**980**	6·887 5526
831	6·722 6298	881	6·781 0576	931	6·836 2593	981	6·888 5725
832	6·723 8324	882	6·782 1921	932	6·837 3328	982	6·889 5913
833	6·725 0336	883	6·783 3252	933	6·838 4052	983	6·890 6091
834	6·726 2334	884	6·784 4571	934	6·839 4764	984	6·891 6259
835	6·727 4317	885	6·785 5876	935	6·840 5465	985	6·892 6416
836	6·728 6286	886	6·786 7170	936	6·841 6155	986	6·893 6564
837	6·729 8241	887	6·787 8450	937	6·842 6833	987	6·894 6700
838	6·731 0181	888	6·788 9717	938	6·843 7499	988	6·895 6827
839	6·732 2107	889	6·790 0972	939	6·844 8155	989	6·896 6943
840	6·733 4019	**890**	6·791 2215	**940**	6·845 8799	**990**	6·897 7049
841	6·734 5917	891	6·792 3444	941	6·846 9431	991	6·898 7145
842	6·735 7800	892	6·793 4661	942	6·848 0053	992	6·899 7231
843	6·736 9670	893	6·794 5866	943	6·849 0663	993	6·900 7307
844	6·738 1525	894	6·795 7058	944	6·850 1262	994	6·901 7372
845	6·739 3366	895	6·796 8237	945	6·851 1849	995	6·902 7427
846	6·740 5194	896	6·797 9404	946	6·852 2426	996	6·903 7473
847	6·741 7007	897	6·799 0559	947	6·853 2991	997	6·904 7508
848	6·742 8806	898	6·800 1701	948	6·854 3545	998	6·905 7533
849	6·744 0592	899	6·801 2830	949	6·855 4088	999	6·906 7548
850	6·745 2363	**900**	6·802 3948	**950**	6·856 4620	**1000**	6·907 7553

NATURAL OR HYPERBOLIC LOGARITHMS.

NUMBER.	LOG.	NUMBER.	LOG.	NUMBER.	LOG.	NUMBER.	LOG.
1001	6·908 7548	1051	6·957 4974	1101	7·003 9741	1151	7·048 3864
1002	6·909 7533	1052	6·958 4484	1102	7·004 8820	1152	7·049 2548
1003	6·910 7508	1053	6·959 3985	1103	7·005 7890	1153	7·050 1225
1004	6·911 7473	1054	6·960 3477	1104	7·006 6952	1154	7·050 9894
1005	6·912 7428	1055	6·961 2960	1105	7·007 6006	1155	7·051 8556
1006	6·913 7374	1056	6·962 2435	1106	7·008 5052	1156	7·052 7210
1007	6·914 7309	1057	6·963 1900	1107	7·009 4089	1157	7·053 5857
1008	6·915 7234	1058	6·964 1356	1108	7·010 3119	1158	7·054 4497
1009	6·916 7150	1059	6·965 0803	1109	7·011 2140	1159	7·055 3128
1010	6·917 7056	**1060**	6·966 0242	**1110**	7·012 1153	**1160**	7·056 1753
1011	6·918 6952	1061	6·966 9671	1111	7·013 0158	1161	7·057 0370
1012	6·919 6838	1062	6·967 9092	1112	7·013 9155	1162	7·057 8979
1013	6·920 6715	1063	6·968 8504	1113	7·014 8144	1163	7·058 7582
1014	6·921 6582	1064	6·969 7907	1114	7·015 7124	1164	7·059 6176
1015	6·922 6439	1065	6·970 7301	1115	7·016 6097	1165	7·060 4764
1016	6·923 6286	1066	6·971 6686	1116	7·017 5061	1166	7·061 3344
1017	6·924 6124	1067	6·972 6063	1117	7·018 4018	1167	7·062 1916
1018	6·925 5952	1068	6·973 5430	1118	7·019 2967	1168	7·063 0482
1019	6·926 5770	1069	6·974 4789	1119	7·020 1907	1169	7·063 9040
1020	6·927 5579	**1070**	6·975 4139	**1120**	7·021 0840	**1170**	7·064 7590
1021	6·928 5378	1071	6·976 3481	1121	7·021 9764	1171	7·065 6134
1022	6·929 5168	1072	6·977 2813	1122	7·022 8681	1172	7·066 4670
1023	6·930 4948	1073	6·978 2137	1123	7·023 7590	1173	7·067 3198
1024	6·931 4718	1074	6·979 1453	1124	7·024 6490	1174	7·068 1720
1025	6·932 4479	1075	6·980 0759	1125	7·025 5383	1175	7·069 0234
1026	6·933 4230	1076	6·981 0057	1126	7·026 4268	1176	7·069 8741
1027	6·934 3972	1077	6·981 9347	1127	7·027 3145	1177	7·070 7241
1028	6·935 3704	1078	6·982 8628	1128	7·028 2014	1178	7·071 5734
1029	6·936 3427	1079	6·983 7900	1129	7·029 0876	1179	7·072 4219
1030	6·937 3141	**1080**	6·984 7163	**1130**	7·029 9729	**1180**	7·073 2697
1031	6·938 2845	1081	6·985 6418	1131	7·030 8575	1181	7·074 1168
1032	6·939 2539	1082	6·986 5665	1132	7·031 7413	1182	7·074 9632
1033	6·940 2225	1083	6·987 4902	1133	7·032 6243	1183	7·075 8089
1034	6·941 1901	1084	6·988 4132	1134	7·033 5065	1184	7·076 6538
1035	6·942 1567	1085	6·989 3353	1135	7·034 3879	1185	7·077 4981
1036	6·943 1224	1086	6·990 2565	1136	7·035 2686	1186	7·078 3416
1037	6·944 0872	1087	6·991 1769	1137	7·036 1485	1187	7·079 1844
1038	6·945 0511	1088	6·992 0964	1138	7·037 0276	1188	7·080 0265
1039	6·946 0140	1089	6·993 0151	1139	7·037 9060	1189	7·080 8679
1040	6·946 9760	**1090**	6·993 9330	**1140**	7·038 7835	**1190**	7·081 7086
1041	6·947 9371	1091	6·994 8500	1141	7·039 6603	1191	7·082 5486
1042	6·948 8972	1092	6·995 7662	1142	7·040 5364	1192	7·083 3878
1043	6·949 8565	1093	6·996 6815	1143	7·041 4117	1193	7·084 2264
1044	6·950 8148	1094	6·997 5960	1144	7·042 2862	1194	7·085 0643
1045	6·951 7722	1095	6·998 5096	1145	7·043 1599	1195	7·085 9015
1046	6·952 7286	1096	6·999 4225	1146	7·044 0329	1196	7·086 7379
1047	6·953 6842	1097	7·000 3345	1147	7·044 9051	1197	7·087 5737
1048	6·954 6389	1098	7·001 2456	1148	7·045 7766	1198	7·088 4088
1049	6·955 5926	1099	7·002 1560	1149	7·046 6473	1199	7·089 2432
1050	6·956·5454	**1100**	7·003 0655	**1150**	7·047 5172	**1200**	7·090 0768

TRIGONOMETRY.

Arc.	Sine. Natural Number.	Sine. Log.	Co-sine. Natural Number.	Co-sine. Log.	Tangent. Natural Number.	Tangent. Log.	Co-tangent. Natural Number.	Co-tangent. Log.	Arc.
0°	·0000 000	Infinite negative.	1·0000 000	10·0000 000	·0000 000	Infinite negative.	Infinite.	Infinite.	90°
30′	·0087 265	7·9408 419	·9999 619	9·9999 835	·0087 269	7·9408 584	114·5886 5	12·0591 416	89 30′
1	·0174 524	8·2418 553	·9998 477	9·9999 338	·0174 551	8·2419 215	57·2899 62	11·7580 785	89
1 30	·0261 769	8·4179 190	·9996 573	9·9998 512	·0261 859	8·4180 679	38·1884 59	11·5819 321	88 30
2	·0348 995	8·5428 192	·9993 908	9·9997 354	·0349 208	8·5430 838	28·6362 53	11·4569 162	88
2 30	·0436 194	8·6396 796	·9990 482	9·9995 865	·0436 609	8·6400 931	22·9037 66	11·3599 069	87 30
3	·0523 360	8·7188 002	·9986 295	9·9994 044	·0524 078	8·7193 958	19·0811 37	11·2806 042	87
3 30	·0610 485	8·7856 753	·9981 348	9·9991 892	·0611 626	8·7864 861	16·3498 55	11·2135 139	86 30
4	·0697 565	8·8435 845	·9975 641	9·9989 408	·0699 268	8·8446 437	14·3006 66	11·1553 563	86
4 30	·0784 591	8·8946 433	·9969 173	9·9986 591	·0787 017	8·8959 842	12·7062 05	11·1040 158	85 30
5	·0871 557	8·9402 960	·9961 947	9·9983 442	·0874 887	8·9419 518	11·4300 52	11·0580 482	85
5 30	·0958 458	8·9815 729	·9953 962	9·9979 960	·0962 890	8·9835 769	10·3853 97	11·0164 231	84 30
6	·1045 285	9·0192 346	·9945 219	9·9976 143	·1051 042	9·0216 202	9·5143 645	10·9783 798	84
6 30	·1132 032	9·0538 588	·9935 719	9·9971 992	·1139 356	9·0566 595	8·7768 874	10·9433 405	83 30
7	·1218 693	9·0858 945	·9925 462	9·9967 507	·1227 846	9·0891 438	8·1443 464	10·9108 562	83
7 30	·1305 262	9·1156 977	·9914 449	9·9962 686	·1316 525	9·1194 291	7·5957 541	10·8805 709	82 30
8	·1391 731	9·1435 553	·9902 681	9·9957 528	·1405 408	9·1478 025	7·1153 697	10·8521 975	82
8 30	·1478 094	9·1697 021	·9890 159	9·9952 033	·1494 510	9·1744 988	6·6911 562	10·8255 012	81 30
9	·1564 345	9·1943 324	·9876 883	9·9946 199	·1583 844	9·1997 125	6·3137 515	10·8002 875	81
9 30	·1650 476	9·2176 092	·9862 856	9·9940 027	·1673 426	9·2236 065	5·9757 644	10·7763 935	80 30
10	·1736 482	9·2396 702	·9848 078	9·9933 515	·1763 270	9·2463 188	5·6712 818	10·7536 812	80
10 30	·1822 355	9·2606 330	·9832 549	9·9926 661	·1853 390	9·2679 669	5·3955 172	10·7320 331	79 30
11	·1908 090	9·2805 988	·9816 272	9·9919 466	·1943 803	9·2886 523	5·1445 540	10·7113 477	79
11 30	·1993 679	9·2996 553	·9799 247	9·9911 927	·2034 523	9·3084 626	4·9151 570	10·6915 374	78 30
12	·2079 117	9·3178 789	·9781 476	9·9904 044	·2125 566	9·3274 745	4·7046 301	10·6725 255	78
12 30	·2164 396	9·3353 368	·9762 960	9·9895 815	·2216 947	9·3457 552	4·5107 085	10·6542 448	77 30
13	·2249 511	9·3520 880	·9743 701	9·9887 239	·2308 682	9·3633 641	4·3314 759	10·6366 359	77
13 30	·2334 454	9·3681 853	·9723 699	9·9878 315	·2400 788	9·3803 537	4·1652 998	10·6196 463	76 30
14	·2419 219	9·3836 752	·9702 957	9·9869 041	·2493 280	9·3967 711	4·0107 809	10·6032 289	76
14 30	·2503 800	9·3985 996	·9681 476	9·9859 416	·2586 176	9·4126 581	3·8667 131	10·5873 419	75 30
15	·2588 190	9·4129 962	·9659 258	9·9849 438	·2679 492	9·4280 525	3·7320 508	10·5719 475	75
15 30	·2672 384	9·4268 988	·9636 305	9·9839 105	·2773 245	9·4429 883	3·6058 835	10·5570 117	74 30
16	·2756 374	9·4403 381	·9612 617	9·9828 416	·2867 454	9·4574 964	3·4874 144	10·5425 036	74
16 30	·2840 153	9·4533 418	·9588 197	9·9817 370	·2962 135	9·4716 048	3·3759 434	10·5283 952	73 30
17	·2923 717	9·4659 353	·9563 048	9·9805 963	·3057 307	9·4853 390	3·2708 526	10·5146 610	73
17 30	·3007 058	9·4781 418	·9537 170	9·9794 195	·3152 988	9·4987 223	3·1715 948	10·5012 777	72 30
18	·3090 170	9·4899 824	·9510 565	9·9782 063	·3249 197	9·5117 760	3·0776 835	10·4882 240	72
18 30	·3173 047	9·5014 764	·9483 237	9·9769 566	·3345 953	9·5245 199	2·9886 850	10·4754 801	71 30
19	·3255 682	9·5126 419	·9455 186	9·9756 701	·3443 276	9·5369 719	2·9042 109	10·4630 281	71
19 30	·3338 069	9·5234 953	·9426 415	9·9743 466	·3541 186	9·5491 487	2·8239 129	10·4508 513	70 30
20	·3420 201	9·5340 517	·9396 926	9·9729 858	·3639 702	9·5610 659	2·7474 774	10·4389 341	70
20 30	·3502 074	9·5443 253	·9366 722	9·9715 876	·3738 847	9·5727 377	2·6746 215	10·4272 623	69 30
21	·3583 679	9·5543 292	·9335 804	9·9701 517	·3838 640	9·5841 774	2·6050 891	10·4158 226	69
21 30	·3665 012	9·5640 754	·9304 176	9·9686 779	·3939 105	9·5953 975	2·5386 479	10·4046 025	68 30
22	·3746 066	9·5735 754	·9271 839	9·9671 659	·4040 262	9·6064 096	2·4750 869	10·3935 904	68
22 30	·3826 834	9·5828 397	·9238 795	9·9656 153	·4142 136	9·6172 243	2·4142 136	10·3827 757	67 30
Arc.	Co-sine.		Sine.		Co-tangent.		Tangent.		Arc.

N. B. From 0° to 22° 30′ the name of the column is at the head of the page, and from 67° 30 to 90° the name of the column is at the foot of the page.

TRIGONOMETRY.

Arc.	Secant.		Co-secant.		Versed Sine.		Co-versed Sine.		Arc.
	Natural Number.	Log.	Natural Number.	Log.	Natural Number.	Log.	Natural Number.	Log.	
0°	1·0000 000	10·0000 000	Infinite.	Infinite.	·0000 000	Infinite negative.	1·0000 000	10·0000 000	90°
30'	1·0000 381	10·0000 165	114·5930 1	12·0591 581	·0000 381	5·5806 620	·9912 735	9·9961 935	89 30'
1	1·0001 523	10·0000 662	57·2986 88	11·7581 447	·0001 523	6·1827 137	·9825 476	9·9923 536	89
1 30	1·0003 428	10·0001 488	38·2015 39	11·5820 810	·0003 427	6·5348 825	·9738 231	9·9884 802	88 30
2	1·0006 095	10·0002 646	28·6537 08	11·4571 808	·0006 092	6·7847 405	·9651 005	9·9845 725	88
2 30	1·0009 527	10·0004 135	22·9255 86	11·3603 204	·0009 518	6·9785 359	·9563 806	9·9806 308	87 30
3	1·0013 723	10·0005 956	19·1073 23	11·2811 998	·0013 705	7·1368 689	·9476 640	9·9766 544	87
3 30	1·0018 687	10·0008 108	16·3804 08	11·2143 247	·0018 652	7·2707 258	·9389 515	9·9726 431	86 30
4	1·0024 419	10·0010 592	14·3355 87	11·1564 155	·0024 359	7·3866 683	·9302 435	9·9685 967	86
4 30	1·0030 922	10·0013 409	12·7454 95	11·1053 567	·0030 827	7·4889 265	·9215 409	9·9645 146	85 30
5	1·0038 198	10·0016 558	11·4737 13	11·0597 040	·0038 053	7·5803 891	·9128 443	9·9603 967	85
5 30	1·0046 251	10·0020 049	10·4334 31	11·0184 271	·0046 038	7·6631 106	·9041 542	9·9562 425	84 30
6	1·0055 083	10·0023 857	9·5667 722	10·9807 654	·0054 781	7·7386 303	·8954 715	9·9520 516	84
6 30	1·0064 697	10·0028 007	8·8336 715	10·9461 412	·0064 281	7·8080 836	·8867 969	9·9478 241	83 30
7	1·0075 098	10·0032 493	8·2055 090	10·9141 055	·0074 538	7·8723 806	·8781 307	9·9435 591	83
7 30	1·0086 290	10·0037 314	7·6612 976	10·8843 023	·0085 551	7·9322 271	·8694 738	9·9392 565	82 30
8	1·0098 276	10·0042 472	7·1852 965	10·8564 447	·0097 319	7·9881 966	·8604 269	9·9349 158	82
8 30	1·0111 061	10·0047 965	6·7655 903	10·8303 039	·0109 841	8·0407 595	·8521 907	9·9305 363	81 30
9	1·0124 651	10·0053 801	6·3924 532	10·8056 676	·0123 117	8·0903 165	·8435 655	9·9261 188	81
9 30	1·0139 052	10·0059 971	6·0588 510	10·7824 308	·0137 142	8·1371 766	·8349 653	9·9216 057	80 30
10	1·0154 266	10·0066 485	5·7587 705	10·7603 298	·0151 922	8·1816 220	·8263 518	9·9171 608	80
10 30	1·0170 300	10·0073 339	5·4874 043	10·7393 670	·0167 451	8·2238 471	·8177 805	9·9126 283	79 30
11	1·0187 167	10·0080 534	5·2408 431	10·7194 012	·0183 728	8·2641 737	·8091 910	9·9080 518	79
11 30	1·0204 868	10·0088 073	5·0158 447	10·7003 447	·0200 753	8·3026 649	·8006 321	9·9034 339	78 30
12	1·0223 406	10·0095 956	4·8097 343	10·6821 011	·0218 524	8·3394 920	·7920 863	9·8987 720	78
12 30	1·0242 795	10·0104 185	4·6202 263	10·6646 346	·0237 040	8·3748 245	·7835 601	9·8940 725	77 30
13	1·0263 041	10·0112 761	4·4454 115	10·6479 120	·0256 299	8·4087 473	·7750 480	9·8893 291	77
13 30	1·0284 152	10·0121 685	4·2836 576	10·6318 045	·0276 300	8·4413 811	·7665 546	9·8845 431	76 30
14	1·0306 136	10·0130 958	4·1335 655	10·6162 576	·0297 041	8·4728 359	·7580 781	9·8797 146	76
14 30	1·0329 003	10·0140 581	3·9939 292	10·6014 004	·0318 524	8·5031 476	·7496 200	9·8748 412	75 30
15	1·0352 762	10·0150 557	3·8637 033	10·5870 012	·0340 742	8·5324 253	·7411 810	9·8699 243	75
15 30	1·0377 422	10·0160 895	3·7419 775	10·5731 012	·0363 695	8·5607 379	·7327 616	9·8649 627	74 30
16	1·0402 994	10·0171 584	3·6279 553	10·5596 619	·0387 383	8·5881 466	·7243 626	9·8599 561	74
16 30	1·0429 489	10·0182 630	3·5209 365	10·5466 592	·0411 803	8·6146 891	·7159 847	9·8549 037	73 30
17	1·0456 918	10·0194 037	3·4203 036	10·5340 647	·0436 952	8·6404 342	·7076 283	9·8498 052	73
17 30	1·0485 291	10·0205 805	3·3255 095	10·5218 582	·0462 830	8·6654 229	·6992 942	9·8446 599	72 30
18	1·0514 622	10·0217 937	3·2360 680	10·5100 176	·0489 435	8·6896 919	·6909 830	9·8394 671	72
18 30	1·0544 923	10·0230 434	3·1515 453	10·4985 236	·0516 763	8·7132 918	·6826 953	9·8342 262	71 30
19	1·0576 207	10·0243 299	3·0715 535	10·4873 581	·0544 814	8·7362 485	·6744 318	9·8289 361	71
19 30	1·0608 487	10·0256 534	2·9957 443	10·4765 047	·0573 585	8·7585 979	·6661 931	9·8235 962	70 30
20	1·0641 778	10·0270 142	2·9238 044	10·4659 483	·0603 074	8·7803 705	·6579 799	9·8182 056	70
20 30	1·0676 094	10·0284 124	2·8554 510	10·4556 747	·0633 278	8·8015 945	·6497 929	9·8127 748	69 30
21	1·0711 450	10·0298 483	2·7904 281	10·4456 708	·0664 196	8·8222 961	·6416 321	9·8072 860	69
21 30	1·0747 862	10·0313 221	2·7285 038	10·4359 246	·0695 824	8·8424 996	·6334 988	9·8017 458	68 30
22	1·0785 347	10·0328 341	2·6694 672	10·4264 246	·0728 161	8·8622 277	·6253 934	9·7961 533	68
22 30	1·0823 922	10·0343 847	2·6131 259	10·4171 603	·0761 205	8·8815 014	·6173 166	9·7905 079	67 30
Arc.	Co-secant.		Secant.		Co-versed Sine.		Versed Sine.		Arc.

N. B. From 0° to 22° 30′ the name of the column is at the head of the page, and from 67° 30′ to 90° the name of the column is at the foot of the page.

TRIGONOMETRY.

Arc.	Sine. Natural Number.	Sine. Log.	Co-sine. Natural Number.	Co-sine. Log.	Tangent. Natural Number.	Tangent. Log.	Co-tangent. Natural Number.	Co-tangent. Log.	Arc.
23°	·3907 311	9·5918 780	·9205 049	9·9640 261	·4244 748	9·6278 519	2·3558 524	10·3721 481	**67°**
23 30′	·3987 491	9·6006 997	·9170 601	9·9623 978	·4348 124	9·6383 019	2·2998 425	10·3616 981	66 30′
24	·4067 366	9·6093 133	·9135 455	9·9607 302	·4452 287	9·6485 831	2·2460 368	10·3514 169	**66**
24 30	·4146 932	9·6177 270	·9099 613	9·9590 229	·4557 263	9·6587 041	2·1942 997	10·3412 959	65 30
25	·4226 183	9·6259 483	·9063 078	9·9572 757	·4663 077	9·6686 725	2·1445 069	10·3313 275	**65**
25 30	·4305 111	9·6339 844	·9025 853	9·9554 882	·4769 755	9·6784 961	2·0965 436	10·3215 039	64 30
26	·4383 711	9·6418 420	·8987 940	9·9536 602	·4877 326	9·6881 818	2·0503 038	10·3118 182	**64**
26 30	·4461 978	9·6495 274	·8949 344	9·9517 912	·4985 816	9·6977 363	2·0056 897	10·3022 637	63 30
27	·4539 905	9·6570 468	·8910 065	9·9498 809	·5095 254	9·7071 659	1·9626 105	10·2928 341	**63**
27 30	·4617 486	9·6644 056	·8870 108	9·9479 289	·5205 671	9·7164 767	1·9209 821	10·2835 233	62 30
28	·4694 716	9·6716 093	·8829 476	9·9459 349	·5317 094	9·7256 744	1·8807 265	10·2743 256	**62**
28 30	·4771 588	9·6786 629	·8788 171	9·9438 985	·5429 557	9·7347 644	1·8417 709	10·2652 356	61 30
29	·4848 096	9·6855 712	·8746 197	9·9418 193	·5543 091	9·7437 520	1·8040 478	10·2562 480	**61**
29 30	·4924 236	9·6923 388	·8703 557	9·9396 968	·5657 728	9·7526 420	1·7674 940	10·2473 580	60 30
30	·5000 000	9·6989 700	·8660 254	9·9375 306	·5773 503	9·7614 394	1·7320 508	10·2385 606	**60**
30 30	·5075 384	9·7054 689	·8616 292	9·9353 204	·5890 450	9·7701 485	1·6976 631	10·2298 515	59 30
31	·5150 381	9·7118 393	·8571 673	9·9330 656	·6008 606	9·7787 737	1·6642 795	10·2212 263	**59**
31 30	·5224 986	9·7180 851	·8526 402	9·9307 658	·6128 008	9·7873 193	1·6318 517	10·2126 807	58 30
32	·5299 193	9·7242 097	·8480 481	9·9284 205	·6248 694	9·7957 892	1·6003 345	10·2042 108	**58**
32 30	·5372 996	9·7302 165	·8433 914	9·9260 292	·6370 703	9·8041 873	1·5696 856	10·1958 127	57 30
33	·5446 390	9·7361 088	·8386 706	9·9235 914	·6494 076	9·8125 174	1·5398 650	10·1874 826	**57**
33 30	·5519 370	9·7418 895	·8338 858	9·9211 066	·6618 856	9·8207 829	1·5108 352	10·1792 171	56 30
34	·5591 929	9·7475 617	·8290 376	9·9185 742	·6745 085	9·8289 874	1·4825 610	10·1710 126	**56**
34 30	·5664 062	9·7531 280	·8241 262	9·9159 937	·6872 810	9·8371 343	1·4550 090	10·1628 657	55 30
35	·5735 764	9·7585 913	·8191 520	9·9133 645	·7002 075	9·8452 268	1·4281 480	10·1547 732	**55**
35 30	·5807 030	9·7639 540	·8141 155	9·9106 860	·7132 931	9·8532 680	1·4019 483	10·1467 320	54 30
36	·5877 853	9·7692 187	·8090 170	9·9079 576	·7265 425	9·8612 610	1·3763 819	10·1387 390	**54**
36 30	·5948 228	9·7743 876	·8038 569	9·9051 787	·7399 611	9·8692 089	1·3514 224	10·1307 911	53 30
37	·6018 150	9·7794 630	·7986 355	9·9023 486	·7535 541	9·8771 144	1·3270 448	10·1228 856	**53**
37 30	·6087 614	9·7844 471	·7933 533	9·8994 667	·7673 270	9·8849 805	1·3032 254	10·1150 195	52 30
38	·6156 615	9·7893 420	·7880 108	9·8965 321	·7812 856	9·8928 098	1·2799 416	10·1071 902	**52**
38 30	·6225 146	9·7941 496	·7826 082	9·8935 444	·7954 359	9·9006 052	1·2571 723	10·0993 948	51 30
39	·6293 204	9·7988 718	·7771 460	9·8905 026	·8097 840	9·9083 692	1·2348 972	10·0916 308	**51**
39 30	·6360 782	9·8035 105	·7716 246	9·8874 061	·8243 364	9·9161 045	1·2130 970	10·0838 955	50 30
40	·6427 876	9·8080 675	·7660 444	9·8842 540	·8390 996	9·9238 135	1·1917 536	10·0761 865	**50**
40 30	·6494 480	9·8125 444	·7604 060	9·8810 455	·8540 807	9·9314 989	1·1708 496	10·0685 011	49 30
41	·6560 590	9·8169 429	·7547 096	9·8777 799	·8692 867	9·9391 631	1·1503 684	10·0608 369	**49**
41 30	·6626 200	9·8212 646	·7489 557	9·8744 561	·8847 253	9·9468 084	1·1302 944	10·0531 916	48 30
42	·6691 306	9·8255 109	·7431 448	9·8710 735	·9004 040	9·9544 374	1·1106 125	10·0455 626	**48**
42 30	·6755 902	9·8296 833	·7372 773	9·8676 309	·9163 312	9·9620 525	1·0913 085	10·0379 475	47 30
43	·6819 984	9·8337 833	·7313 537	9·8641 275	·9325 151	9·9696 559	1·0723 687	10·0303 441	**47**
43 30	·6883 546	9·8378 122	·7253 744	9·8605 622	·9489 646	9·9772 500	1·0537 801	10·0227 500	46 30
44	·6946 584	9·8417 713	·7193 398	9·8569 341	·9656 888	9·9848 372	1·0355 303	10·0151 628	**46**
44 30	·7009 093	9·8456 618	·7132 504	9·8532 421	·9826 973	9·9924 197	1·0176 074	10·0075 803	45 30
45	·7071 068	9·8494 850	·7071 068	9·8494 850	1·0000 000	10·0000 000	1·0000 000	10·0000 000	**45**
Arc.	Co-sine.		Sine.		Co-tangent.		Tangent.		Arc.

N. B. From **23°** to **45°** the name of the column is at the head of the page, and from **45°** to **67°** the name of the column is at the foot of the page.

TRIGONOMETRY.

Arc.	Secant.		Co-secant.		Versed Sine.		Co-versed Sine.		Arc.
	Natural Number.	Log.	Natural Number.	Log.	Natural Number.	Log.	Natural Number.	Log.	
23°	1·0863 604	10·0359 739	2·5593 047	10·4081 220	·0794 951	8·9003 406	·6092 669	9·7848 099	**67°**
23 30	1·0904 411	10·0376 022	2·5078 428	10·3993 003	·0829 399	8·9187 639	·6012 509	9·7790 558	66 30
24	1·0946 363	10·0392 698	2·4585 933	10·3906 867	·0864 545	8·9367 878	·5932 634	9·7732 475	**66**
24 30	1·0989 479	10·0409 771	2·4114 210	10·3822 730	·0900 387	8·9544 294	·5853 068	9·7673 835	65 30
25	1·1033 779	10·0427 243	2·3662 016	10·3740 517	·0936 922	8·9717 035	·5773 817	9·7614 630	**65**
25 30	1·1079 285	10·0445 118	2·3228 205	10·3660 156	·0974 147	8·9886 216	·5694 889	9·7554 853	64 30
26	1·1126 019	10·0463 398	2·2811 720	10·3581 580	·1012 060	9·0052 051	·5616 289	9·7494 491	**64**
26 30	1·1174 004	10·0482 088	2·2411 585	10·3504 726	·1050 656	9·0214 607	·5538 022	9·7433 547	63 30
27	1·1223 262	10·0501 191	2·2026 893	10·3429 532	·1089 935	9·0374 005	·5460 095	9·7372 002	**63**
27 30	1·1273 819	10·0520 711	2·1656 806	10·3355 944	·1129 892	9·0530 368	·5382 514	9·7309 852	62 30
28	1·1325 701	10·0540 651	2·1300 545	10·3283 907	·1170 524	9·0683 803	·5305 284	9·7247 087	**62**
28 30	1·1378 932	10·0561 015	2·0957 385	10·3213 371	·1211 829	9·0834 413	·5228 412	9·7183 698	61 30
29	1·1433 541	10·0581 807	2·0626 653	10·3144 288	·1253 803	9·0982 293	·5151 904	9·7119 677	**61**
29 30	1·1489 555	10·0603 032	2·0307 720	10·3076 612	·1296 443	9·1127 534	·5075 764	9·7055 015	60 30
30	1·1547 005	10·0624 694	2·0000 000	10·3010 300	·1339 746	9·1270 225	·5000 000	9·6989 700	**60**
30 30	1·1605 921	10·0646 796	1·9702 944	10·2945 311	·1383 708	9·1410 446	·4924 616	9·6923 724	59 30
31	1·1666 334	10·0669 344	1·9416 040	10·2881 607	·1428 327	9·1548 276	·4849 619	9·6857 076	**59**
31 30	1·1728 277	10·0692 342	1·9138 809	10·2819 149	·1473 598	9·1683 791	·4775 014	9·6789 747	58 30
32	1·1791 784	10·0715 795	1·8870 799	10·2757 903	·1519 519	9·1817 061	·4700 807	9·6721 725	**58**
32 30	1·1856 890	10·0739 708	1·8611 590	10·2697 835	·1566 086	9·1948 155	·4627 004	9·6652 999	57 30
33	1·1923 633	10·0764 086	1·8360 785	10·2638 912	·1613 294	9·2077 136	·4553 610	9·6583 558	**57**
33 30	1·1992 049	10·0788 934	1·8118 010	10·2581 105	·1661 142	9·2204 067	·4480 630	9·6513 391	56 30
34	1·2062 179	10·0814 258	1·7882 916	10·2524 383	·1709 624	9·2329 007	·4408 071	9·6442 486	**56**
34 30	1·2134 064	10·0840 063	1·7655 173	10·2468 720	·1758 738	9·2452 012	·4335 938	9·6370 880	55 30
35	1·2207 746	10·0866 355	1·7434 468	10·2414 087	·1808 480	9·2573 136	·4264 236	9·6298 412	**55**
35 30	1·2283 269	10·0893 140	1·7220 508	10·2360 460	·1858 845	9·2692 431	·4192 970	9·6225 218	54 30
36	1·2360 680	10·0920 424	1·7013 016	10·2307 813	·1909 830	9·2809 947	·4122 147	9·6151 235	**54**
36 30	1·2440 026	10·0948 213	1·6811 730	10·2256 124	·1961 431	9·2925 731	·4051 772	9·6076 450	53 30
37	1·2521 357	10·0976 514	1·6616 401	10·2205 370	·2013 645	9·3039 829	·3981 850	9·6000 849	**53**
37 30	1·2604 724	10·1005 333	1·6426 796	10·2155 529	·2066 467	9·3152 284	·3912 386	9·5924 417	52 30
38	1·2690 182	10·1034 679	1·6242 692	10·2106 580	·2119 892	9·3263 128	·3843 385	9·5847 139	**52**
38 30	1·2777 787	10·1064 556	1·6063 879	10·2058 504	·2173 918	9·3372 432	·3774 854	9·5769 001	51 30
39	1·2867 596	10·1094 974	1·5890 157	10·2011 282	·2228 540	9·3480 205	·3706 796	9·5689 987	**51**
39 30	1·2959 670	10·1125 939	1·5721 337	10·1964 895	·2283 754	9·3586 494	·3639 218	9·5610 080	50 30
40	1·3054 073	10·1157 460	1·5557 238	10·1919 325	·2339 556	9·3691 334	·3572 124	9·5529 265	**50**
40 30	1·3150 870	10·1189 545	1·5397 690	10·1874 556	·2395 940	9·3794 760	·3505 520	9·5447 524	49 30
41	1·3250 130	10·1222 201	1·5242 531	10·1830 571	·2452 904	9·3896 806	·3439 410	9·5364 839	**49**
41 30	1·3351 924	10·1255 439	1·5091 605	10·1787 354	·2510 443	9·3997 503	·3373 800	9·5281 193	48 30
42	1·3456 327	10·1289 265	1·4944 765	10·1744 891	·2568 552	9·4096 883	·3308 694	9·5196 566	**48**
42 30	1·3563 417	10·1323 691	1·4801 872	10·1703 167	·2627 227	9·4194 975	·3244 098	9·5110 940	47 30
43	1·3673 275	10·1358 725	1·4662 792	10·1662 167	·2686 463	9·4291 809	·3180 016	9·5024 294	**47**
43 30	1·3785 985	10·1394 378	1·4527 397	10·1621 878	·2746 256	9·4387 411	·3116 454	9·4936 608	46 30
44	1·3901 636	10·1430 659	1·4395 565	10·1582 287	·2806 602	9·4481 808	·3053 416	9·4847 860	**46**
44 30	1·4020 321	10·1467 579	1·4267 182	10·1543 382	·2867 496	9·4575 027	·2990 907	9·4758 030	45 30
45	1·4142 136	10·1505 150	1·4142 136	10·1505 150	·2928 932	9·4667 093	·2928 932	9·4667 093	**45**
Arc.	Co-secant.		Secant.		Co-versed Sine.		Versed Sine.		Arc.

N.B. From 23° to 45° the name of the column is at the head of the page, and from 45° to 67° the name of the column is at the foot of the page.

DIAMETER, CIRCUMFERENCE, AND AREA OF CIRCLES.

Diameter.	Circumference.	Area.	Diameter.	Circumference.	Area.	Diameter.	Circumference.	Area.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	510·70
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	520·76
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	530·93
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	541·18
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	551·54

DIAMETER, CIRCUMFERENCE, AND AREA OF CIRCLES.

Diameter.	Circumference.	Area.	Diameter.	Circumference.	Area.	Diameter.	Circumference.	Area.
33·	[illegible]	[illegible]	44·50	139·80087	[illegible]	55·75	175·14379	[illegible]
33·25	[illegible]	[illegible]	44·75	140·58627	[illegible]	**56·**	[illegible]	[illegible]
33·50	[illegible]	[illegible]	**45·**	141·37166	[illegible]	56·25	[illegible]	[illegible]
33·75	[illegible]	[illegible]	45·25	142·15706	[illegible]	56·50	[illegible]	[illegible]
34·	[illegible]	[illegible]	45·50	142·94246	[illegible]	56·75	[illegible]	[illegible]
34·25	[illegible]	[illegible]	45·75	143·72786	[illegible]	**57·**	[illegible]	[illegible]
34·50	[illegible]	[illegible]	**46·**	144·51326	[illegible]	57·25	[illegible]	[illegible]
34·75	[illegible]	[illegible]	46·25	145·29866	[illegible]	57·50	[illegible]	[illegible]
35·	[illegible]	[illegible]	46·50	146·08406	[illegible]	57·75	[illegible]	[illegible]
35·25	[illegible]	[illegible]	46·75	146·86945	[illegible]	**58·**	[illegible]	[illegible]
35·50	[illegible]	[illegible]	**47·**	147·65485	[illegible]	58·25	[illegible]	[illegible]
35·75	[illegible]	[illegible]	47·25	148·44025	[illegible]	58·50	[illegible]	[illegible]
36·	[illegible]	[illegible]	47·50	149·22565	[illegible]	58·75	[illegible]	[illegible]
36·25	[illegible]	[illegible]	47·75	150·01104	[illegible]	**59·**	[illegible]	[illegible]
36·50	[illegible]	[illegible]	**48·**	150·79644	[illegible]	59·25	[illegible]	[illegible]
36·75	[illegible]	[illegible]	48·25	151·58184	[illegible]	59·50	[illegible]	[illegible]
37·	[illegible]	[illegible]	48·50	152·36724	[illegible]	59·75	[illegible]	[illegible]
37·25	[illegible]	[illegible]	48·75	153·15263	[illegible]	**60·**	[illegible]	[illegible]
37·50	[illegible]	[illegible]	**49·**	153·93804	[illegible]	60·25	[illegible]	[illegible]
37·75	[illegible]	[illegible]	49·25	154·72343	[illegible]	60·50	[illegible]	[illegible]
38·	[illegible]	[illegible]	49·50	155·50883	[illegible]	60·75	[illegible]	[illegible]
38·25	[illegible]	[illegible]	49·75	156·29423	[illegible]	**61·**	[illegible]	[illegible]
38·50	[illegible]	[illegible]	**50·**	157·07963	[illegible]	61·25	[illegible]	[illegible]
38·75	[illegible]	[illegible]	50·25	157·86503	[illegible]	61·50	[illegible]	[illegible]
39·	[illegible]	[illegible]	50·50	158·65042	[illegible]	61·75	[illegible]	[illegible]
39·25	[illegible]	[illegible]	50·75	159·43582	[illegible]	**62·**	[illegible]	[illegible]
39·50	[illegible]	[illegible]	**51·**	160·22122	[illegible]	62·25	[illegible]	[illegible]
39·75	[illegible]	[illegible]	51·25	161·00662	[illegible]	62·50	[illegible]	[illegible]
40·	[illegible]	[illegible]	51·50	161·79202	[illegible]	62·75	[illegible]	[illegible]
40·25	[illegible]	[illegible]	51·75	162·57741	[illegible]	**63·**	[illegible]	[illegible]
40·50	[illegible]	[illegible]	**52·**	163·36281	[illegible]	63·25	[illegible]	[illegible]
40·75	[illegible]	[illegible]	52·25	164·14821	[illegible]	63·50	[illegible]	[illegible]
41·	[illegible]	[illegible]	52·50	164·93361	[illegible]	63·75	[illegible]	[illegible]
41·25	[illegible]	[illegible]	52·75	165·71901	[illegible]	**64·**	[illegible]	[illegible]
41·50	[illegible]	[illegible]	**53·**	166·50441	[illegible]	64·25	[illegible]	[illegible]
41·75	[illegible]	[illegible]	53·25	167·28980	[illegible]	64·50	[illegible]	[illegible]
42·	[illegible]	[illegible]	53·50	168·07520	[illegible]	64·75	[illegible]	[illegible]
42·25	[illegible]	[illegible]	53·75	168·86060	2269·06	**65·**	[illegible]	[illegible]
42·50	[illegible]	[illegible]	**54·**	169·64600	[illegible]	65·25	[illegible]	[illegible]
42·75	[illegible]	[illegible]	54·25	170·43140	[illegible]	65·50	[illegible]	[illegible]
43·	[illegible]	[illegible]	54·50	171·21679	[illegible]	65·75	[illegible]	[illegible]
43·25	[illegible]	[illegible]	54·75	172·00219	[illegible]	**66·**	[illegible]	[illegible]
43·50	[illegible]	[illegible]	**55·**	172·78759	[illegible]	66·25	208·13052	[illegible]
43·75	[illegible]	[illegible]	55·25	173·57299	[illegible]	66·50	208·91591	[illegible]
44·	[illegible]	[illegible]	55·50	174·35839	[illegible]	66·75	209·70130	[illegible]
44·25	[illegible]	[illegible]						

DIAMETER, CIRCUMFERENCE, AND AREA OF CIRCLES.

Diameter.	Circumference.	Area.	Diameter.	Circumference.	Area.	Diameter.	Circumference.	Area.
67·	[illegible]	[illegible]	78·25	245·82962	[illegible]	89·25	280·38714	[illegible]
67·25	[illegible]	[illegible]	78·50	246·61502	[illegible]	89·50	281·17254	[illegible]
67·50	[illegible]	[illegible]	78·75	247·40042	[illegible]	89·75	281·95794	[illegible]
67·75	[illegible]	[illegible]						
68·	[illegible]	[illegible]	79·	248·18581	[illegible]	90·	282·74334	[illegible]
68·25	[illegible]	[illegible]	79·25	248·97121	[illegible]	90·25	283·52873	[illegible]
68·50	[illegible]	[illegible]	79·50	249·75661	[illegible]	90·50	284·31413	[illegible]
68·75	[illegible]	[illegible]	79·75	250·54201	[illegible]	90·75	285·09953	[illegible]
69·	[illegible]	[illegible]	80·	251·32741	[illegible]	91·	285·88493	[illegible]
69·25	[illegible]	[illegible]	80·25	252·11281	[illegible]	91·25	286·67033	[illegible]
69·50	[illegible]	[illegible]	80·50	252·89820	[illegible]	91·50	287·45572	[illegible]
69·75	[illegible]	[illegible]	80·75	253·68360	[illegible]	91·75	288·24112	[illegible]
70·	[illegible]	[illegible]	81·	254·46900	[illegible]	92·	289·02652	[illegible]
70·25	[illegible]	[illegible]	81·25	255·25440	[illegible]	92·25	289·81192	[illegible]
70·50	[illegible]	[illegible]	81·50	256·03980	[illegible]	92·50	290·59732	[illegible]
70·75	[illegible]	[illegible]	81·75	256·82519	[illegible]	92·75	291·38271	[illegible]
71·	[illegible]	[illegible]	82·	[illegible]	[illegible]	93·	[illegible]	[illegible]
71·25	[illegible]	[illegible]	82·25	[illegible]	[illegible]	93·25	[illegible]	[illegible]
71·50	[illegible]	[illegible]	82·50	259·18139	[illegible]	93·50	[illegible]	[illegible]
71·75	[illegible]	[illegible]	82·75	259·96679	[illegible]	93·75	[illegible]	[illegible]
72·	[illegible]	[illegible]	83·	260·75219	[illegible]	94·	[illegible]	[illegible]
72·25	[illegible]	[illegible]	83·25	261·53758	[illegible]	94·25	[illegible]	[illegible]
72·50	[illegible]	[illegible]	83·50	262·32298	[illegible]	94·50	[illegible]	[illegible]
72·75	[illegible]	[illegible]	83·75	263·10838	[illegible]	94·75	[illegible]	[illegible]
73·	[illegible]	[illegible]	84·	263·89378	[illegible]	95·	[illegible]	[illegible]
73·25	[illegible]	[illegible]	84·25	264·67918	[illegible]	95·25	[illegible]	[illegible]
73·50	[illegible]	[illegible]	84·50	265·46457	[illegible]	95·50	[illegible]	[illegible]
73·75	[illegible]	[illegible]	84·75	266·24997	[illegible]	95·75	[illegible]	[illegible]
74·	[illegible]	[illegible]	85·	[illegible]	[illegible]	96·	[illegible]	[illegible]
74·25	[illegible]	[illegible]	85·25	[illegible]	[illegible]	96·25	[illegible]	[illegible]
74·50	[illegible]	[illegible]	85·50	[illegible]	[illegible]	96·50	[illegible]	[illegible]
74·75	[illegible]	[illegible]	85·75	269·39157	[illegible]	96·75	[illegible]	[illegible]
75·	[illegible]	[illegible]	86·	270·17696	[illegible]	97·	[illegible]	[illegible]
75·25	[illegible]	[illegible]	86·25	270·96236	[illegible]	97·25	[illegible]	[illegible]
75·50	[illegible]	[illegible]	86·50	271·74776	[illegible]	97·50	[illegible]	[illegible]
75·75	[illegible]	[illegible]	86·75	272·53316	[illegible]	97·75	[illegible]	[illegible]
76·	[illegible]	[illegible]	87·	273·31856	[illegible]	98·	[illegible]	[illegible]
76·25	[illegible]	[illegible]	87·25	274·10395	[illegible]	98·25	[illegible]	[illegible]
76·50	[illegible]	[illegible]	87·50	[illegible]	[illegible]	98·50	[illegible]	[illegible]
76·75	[illegible]	[illegible]	87·75	275·67475	[illegible]	98·75	[illegible]	[illegible]
77·	[illegible]	[illegible]	88·	[illegible]	[illegible]	99·	[illegible]	7697·68
77·25	[illegible]	[illegible]	88·25	[illegible]	[illegible]	99·25	[illegible]	7736·61
77·50	[illegible]	[illegible]	88·50	278·03094	[illegible]	99·50	[illegible]	7775·63
77·75	[illegible]	[illegible]	88·75	278·81634	[illegible]	99·75	[illegible]	7814·76
78·	245·04122	[illegible]	89·	279·60174	[illegible]	100·	314·15927	7853·98

LENGTH OF CIRCULAR ARCS.—Radius = 1.

Degrees.	Arc.	Degrees.	Arc.	Degrees.	Arc.	Degrees.	Arc.
1°	·0174533	46°	·8028515	91°	1·5882496	136°	2·3736478
2	·0349066	47	·8203047	92	1·6057029	137	2·3911011
3	·0523599	48	·8377580	93	1·6231562	138	2·4085544
4	·0698132	49	·8552113	94	1·6406095	139	2·4260077
5	·0872665	**50**	·8726646	**95**	1·6580628	**140**	2·4434610
6	·1047198	51	·8901179	96	1·6755161	141	2·4609142
7	·1221730	52	·9075712	97	1·6929694	142	2·4783675
8	·1396263	53	·9250245	98	1·7104227	143	2·4958208
9	·1570796	54	·9424778	99	1·7278760	144	2·5132741
10	·1745329	**55**	·9599311	**100**	1·7453293	**145**	2·5307274
11	·1919862	56	·9773844	101	1·7627825	146	2·5481807
12	·2094395	57	·9948377	102	1·7802358	147	2·5656340
13	·2268928	58	1·0122910	103	1·7976891	148	2·5830873
14	·2443461	59	1·0297443	104	1·8151424	149	2·6005406
15	·2617994	**60**	1·0471976	**105**	1·8325957	**150**	2·6179939
16	·2792527	61	1·0646508	106	1·8500490	151	2·6354472
17	·2967060	62	1·0821041	107	1·8675023	152	2·6529005
18	·3141593	63	1·0995574	108	1·8849556	153	2·6703538
19	·3316126	64	1·1170107	109	1·9024089	154	2·6878070
20	·3490659	**65**	1·1344640	**110**	1·9198622	**155**	2·7052603
21	·3665191	66	1·1519173	111	1·9373155	156	2·7227136
22	·3839724	67	1·1693706	112	1·9547688	157	2·7401669
23	·4014257	68	1·1868239	113	1·9722221	158	2·7576202
24	·4188790	69	1·2042772	114	1·9896753	159	2·7750735
25	·4363323	**70**	1·2217305	**115**	2·0071286	**160**	2·7925268
26	·4537856	71	1·2391838	116	2·0245819	161	2·8099801
27	·4712389	72	1·2566371	117	2·0420352	162	2·8274334
28	·4886922	73	1·2740904	118	2·0594885	163	2·8448867
29	·5061455	74	1·2915436	119	2·0769418	164	2·8623400
30	·5235988	**75**	1·3089969	**120**	2·0943951	**165**	2·8797933
31	·5410521	76	1·3264502	121	2·1118484	166	2·8972466
32	·5585054	77	1·3439035	122	2·1293017	167	2·9146999
33	·5759587	78	1·3613568	123	2·1467550	168	2·9321531
34	·5934119	79	1·3788101	124	2·1642083	169	2·9496064
35	·6108652	**80**	1·3962634	**125**	2·1816616	**170**	2·9670597
36	·6283185	81	1·4137167	126	2·1991149	171	2·9845130
37	·6457718	82	1·4311700	127	2·2165682	172	3·0019663
38	·6632251	83	1·4486233	128	2·2340214	173	3·0194196
39	·6806784	84	1·4660766	129	2·2514747	174	3·0368729
40	·6981317	**85**	1·4835299	**130**	2·2689280	**175**	3·0543262
41	·7155850	86	1·5009832	131	2·2863813	176	3·0717795
42	·7330383	87	1·5184364	132	2·3038346	177	3·0892328
43	·7504916	88	1·5358897	133	2·3212879	178	3·1066861
44	·7679449	89	1·5533430	134	2·3387412	179	3·1241394
45	·7853982	**90**	1·5707963	**135**	2·3561945	**180**	3·1415927

′	Arc.	′	Arc.	″	Arc.	″	Arc.	‴	Arc.	‴	Arc.
1′	2 909	10′	29 089	1″	48	10″	485	1‴	1	10‴	8
2	5 818	15	43 633	2	97	15	727	2	2	15	12
3	8 727	20	58 178	3	145	20	970	3	2	20	16
4	11 636	30	87 266	4	194	30	1 454	4	3	30	24
5	14 544	45	130 900	5	242	45	2 182	5	4	45	36
6	17 453	50	145 444	6	291	50	2 424	6	5	50	40

LENGTH OF CHORDS.—Radius = 10,000.

Degrees.	Chords.	Degrees.	Chords.	Degrees.	Chords.	Degrees.	Chords.
1°	175	51°	8 610	101°	15 432	151°	19 363
2	349	52	8 767	102	15 543	152	19 406
3	524	53	8 924	103	15 652	153	19 447
4	698	54	9 080	104	15 760	154	19 487
5	872	55	9 235	105	15 867	155	19 526
6	1 047	56	9 389	106	15 973	156	19 563
7	1 221	57	9 543	107	16 077	157	19 598
8	1 395	58	9 696	108	16 180	158	19 633
9	1 569	59	9 848	109	16 282	159	19 665
10	1 743	**60**	10 000	**110**	16 383	**160**	19 696
11	1 917	61	10 151	111	16 483	161	19 726
12	2 091	62	10 301	112	16 581	162	19 754
13	2 264	63	10 450	113	16 678	163	19 780
14	2 437	64	10 598	114	16 773	164	19 805
15	2 611	65	10 746	115	16 868	165	19 829
16	2 783	66	10 893	116	16 961	166	19 851
17	2 956	67	11 039	117	17 053	167	19 871
18	3 129	68	11 184	118	17 143	168	19 890
19	3 301	69	11 328	119	17 233	169	19 908
20	3 473	**70**	11 472	**120**	17 321	**170**	19 924
21	3 645	71	11 614	121	17 407	171	19 938
22	3 816	72	11 756	122	17 492	172	19 951
23	3 987	73	11 896	123	17 576	173	19 963
24	4 158	74	12 036	124	17 659	174	19 973
25	4 329	75	12 175	125	17 740	175	19 981
26	4 499	76	12 313	126	17 820	176	19 988
27	4 669	77	12 450	127	17 899	177	19 993
28	4 838	78	12 586	128	17 976	178	19 997
29	5 008	79	12 722	129	18 052	179	19 999
30	5 176	**80**	12 856	**130**	18 126	**180**	20 000
31	5 345	81	12 989	131	18 199		
32	5 513	82	13 121	132	18 271		
33	5 680	83	13 252	133	18 341		
34	5 847	84	13 383	134	18 410		
35	6 014	85	13 512	135	18 478		
36	6 180	86	13 640	136	18 544		
37	6 346	87	13 767	137	18 608		
38	6 511	88	13 893	138	18 672		
39	6 676	89	14 018	139	18 733		
40	6 840	**90**	14 142	**140**	18 794		
41	7 004	91	14 265	141	18 853		
42	7 167	92	14 387	142	18 910		
43	7 330	93	14 507	143	18 966		
44	7 492	94	14 627	144	19 021		
45	7 654	95	14 746	145	19 074		
46	7 815	96	14 863	146	19 126		
47	7 975	97	14 979	147	19 176		
48	8 135	98	15 094	148	19 225		
49	8 294	99	15 208	149	19 273		
50	8 452	**100**	15 321	**150**	19 319		

☞ The above Table is from *La Goniométrie*, by L. B. Francœur. 1820.

THE AREA AND DIAGONAL OF SQUARES.

Side.	Area.	Diagonal.	Side.	Area.	Diagonal.
1	1	1·414 213 562 373	51	2601	72·124 891 681 023
2	4	2·828 427 124 746	52	2704	73·539 105 243 396
3	9	4·242 640 687 119	53	2809	74·953 318 805 769
4	16	5·656 854 249 492	54	2916	76·367 532 368 142
5	25	7·071 067 811 865	55	3025	77·781 745 930 515
6	36	8·485 281 374 238	56	3136	79·195 959 492 888
7	49	9·899 494 936 611	57	3249	80·610 173 055 261
8	64	11·313 708 498 984	58	3364	82·024 386 617 634
9	81	12·727 922 061 357	59	3481	83·438 600 180 007
10	100	14·142 135 623 730	**60**	3600	84·852 813 742 385
11	121	15·556 349 186 103	61	3721	86·267 027 304 753
12	144	16·970 562 748 476	62	3844	87·681 240 867 126
13	169	18·384 776 310 849	63	3969	89·095 454 429 499
14	196	19·798 989 873 222	64	4096	90·509 667 991 872
15	225	21·213 203 435 595	65	4225	91·923 881 554 245
16	256	22·627 416 997 968	66	4356	93·338 095 116 618
17	289	24·041 630 560 341	67	4489	94·752 308 678 991
18	324	25·455 844 122 714	68	4624	96·166 522 241 364
19	361	26·870 057 685 087	69	4761	97·580 735 803 737
20	400	28·284 271 247 461	**70**	4900	98·994 949 366 116
21	441	29·698 484 809 833	71	5041	100·409 162 928 483
22	484	31·112 698 372 206	72	5184	101·823 376 490 856
23	529	32·526 911 934 579	73	5329	103·237 590 053 229
24	576	33·941 125 496 952	74	5476	104·651 803 615 602
25	625	35·355 339 059 325	75	5625	106·066 017 177 975
26	676	36·769 552 621 698	76	5776	107·480 230 740 348
27	729	38·183 766 184 071	77	5929	108·894 444 302 721
28	784	39·597 979 746 444	78	6084	110·308 657 865 094
29	841	41·012 193 308 817	79	6241	111·722 871 427 467
30	900	42·426 406 871 192	**80**	6400	113·137 084 989 847
31	961	43·840 620 433 563	81	6561	114·551 298 552 213
32	1024	45·254 833 995 936	82	6724	115·965 512 114 586
33	1089	46·669 047 558 309	83	6889	117·379 725 676 959
34	1156	48·083 261 120 682	84	7056	118·793 939 239 332
35	1225	49·497 474 683 055	85	7225	120·208 152 801 705
36	1296	50·911 688 245 428	86	7396	121·622 366 364 078
37	1369	52·325 901 807 801	87	7569	123·036 579 926 451
38	1444	53·740 115 370 174	88	7744	124·450 793 488 824
39	1521	55·154 328 932 547	89	7921	125·865 007 051 197
40	1600	56·568 542 494 923	**90**	8100	127·279 220 613 578
41	1681	57·982 756 057 293	91	8281	128·693 434 175 943
42	1764	59·396 969 619 666	92	8464	130·107 647 738 316
43	1849	60·811 183 182 039	93	8649	131·521 861 300 689
44	1936	62·225 396 744 412	94	8836	132·936 074 863 062
45	2025	63·639 610 306 785	95	9025	134·350 288 425 435
46	2116	65·053 823 869 158	96	9216	135·764 501 987 808
47	2209	66·468 037 431 531	97	9409	137·178 715 550 181
48	2304	67·882 250 993 904	98	9604	138·592 929 112 554
49	2401	69·296 464 556 277	99	9801	140·007 142 674 927
50	2500	70·710 678 118 654	**100**	10000	141·421 356 237 309

DIAMETER, SOLIDITY, AND SUPERFICIES OF SPHERES.

Diameter.	Solidity.	Superficies.
1	·523 598 775	3·141 592 653
2	4·188 790 204	12·566 370 614
3	14·137 166 941	28·274 333 882
4	33·510 321 638	50·265 482 457
5	65·449 846 949	78·539 816 339
6	113·097 335 529	113·097 335 529
7	179·594 380 030	153·938 040 025
8	268·082 573 106	201·061 929 829
9	381·703 507 411	254·469 004 940
10	523·598 775 598	314·159 265 358
11	696·909 970 321	380·132 711 084
12	904·778 684 233	452·389 342 116
13	1 150·346 509 989	530·929 158 456
14	1 436·755 040 241	615·752 160 103
15	1 767·145 867 644	706·858 347 057
16	2 144·660 584 850	804·247 719 318
17	2 572·440 784 514	907·920 276 887
18	3 053·628 059 289	1 017·876 019 763
19	3 591·364 001 828	1 134·114 947 945
20	4 188·790 204 786	1 256·637 061 435
21	4 849·048 260 815	1 385·442 360 233
22	5 575·279 762 570	1 520·530 844 337
23	6 370·626 302 704	1 661·902 513 749
24	7 238·229 473 870	1 809·557 368 467
25	8 181·230 868 723	1 963·495 408 493
26	9 202·772 079 915	2 123·716 633 826
27	10 305·994 700 101	2 290·221 044 466
28	11 494·040 321 933	2 463·008 640 414
29	12 770·050 538 066	2 642·079 421 669
30	14 137·166 941 154	2 827·433 388 230
31	15 598·531 123 848	3 019·070 540 099
32	17 157·284 678 805	3 216·990 877 275
33	18 816·569 198 676	3 421·194 399 759
34	20 579·526 276 115	3 631·681 107 549
35	22 449·297 503 777	3 848·451 000 647
36	24 429·024 474 314	4 071·504 079 052
37	26 521·848 780 380	4 300·840 342 764
38	28 730·912 014 629	4 536·459 791 783
39	31 059·355 769 715	4 778·362 426 110
40	33 510·321 638 291	5 026·548 245 743
41	36 086·951 213 010	5 281·017 250 684
42	38 792·386 086 526	5 541·769 440 932
43	41 629·767 851 493	5 808·804 816 487
44	44 602·238 100 565	6 082·123 377 349
45	47 712·938 426 394	6 361·725 123 519
46	50 965·010 421 636	6 647·610 054 996
47	54 361·595 678 942	6 939·778 171 779
48	57 905·835 790 967	7 238·229 473 870
49	61 600·872 350 364	7 542·963 961 269
50	65 449·846 949 787	7 853·981 633 974

DIAMETER, SOLIDITY AND SUPERFICIES OF SPHERES.

Diameter.	Solidity.	Superficies.
51	[illegible]	[illegible]
52	[illegible]	[illegible]
53	[illegible]	[illegible]
54	[illegible]	[illegible]
55	[illegible]	[illegible]
56	[illegible]	[illegible]
57	[illegible]	[illegible]
58	[illegible]	[illegible]
59	[illegible]	[illegible]
60	[illegible]	[illegible]
61	[illegible]	11 689 860 264 007
62	[illegible]	[illegible]
63	[illegible]	[illegible]
64	[illegible]	[illegible]
65	[illegible]	[illegible]
66	[illegible]	[illegible]
67	[illegible]	[illegible]
68	[illegible]	[illegible]
69	[illegible]	[illegible]
70	[illegible]	[illegible]
71	[illegible]	[illegible]
72	[illegible]	[illegible]
73	[illegible]	[illegible]
74	[illegible]	[illegible]
75	[illegible]	[illegible]
76	[illegible]	[illegible]
77	[illegible]	[illegible]
78	[illegible]	[illegible]
79	[illegible]	[illegible]
80	[illegible]	[illegible]
81	[illegible]	[illegible]
82	[illegible]	[illegible]
83	[illegible]	[illegible]
84	[illegible]	[illegible]
85	[illegible]	[illegible]
86	[illegible]	[illegible]
87	[illegible]	[illegible]
88	[illegible]	[illegible]
89	[illegible]	[illegible]
90	[illegible]	[illegible]
91	[illegible]	[illegible]
92	[illegible]	[illegible]
93	[illegible]	[illegible]
94	[illegible]	[illegible]
95	[illegible]	[illegible]
96	[illegible]	[illegible]
97	[illegible]	[illegible]
98	[illegible]	[illegible]
99	[illegible]	[illegible]
100	[illegible]	31 415 926 535 897

GEOGRAPHY.

MEASUREMENTS of the Superficies of the LAND on CONTINENTS and ISLANDS, in Square Degrees, by M. BALACHOFF.

From the '*Comptes Rendus de l'Académie des Sciences*,' 6 Dec. 1852.

The entire surface of the GLOBE . . . . 41,126 square degrees.
Of which little more than ¼ is TERRA FIRMA . . . . 10,850 do.

		SQUARE DEGREES.
EUROPE		796·18
ASIA		3365·46
AFRICA		2366·39
NORTH AMERICA		2000·
SOUTH AMERICA		1447·28
OCEANICA { Australia	633	
OCEANICA { Various Archipelagos .	242	875·
		10850·31

The following are among the principal ISLANDS of the Globe.

	Square Degrees.		Square Degrees.		Square Degrees.
BORNEO	58·12	JAVA	11·25	SPITZBERGEN	6·
NEW GUINEA . . .	56·70	MANILLA	10·	VAN DIEMEN	5·
MADAGASCAR . . .	49·50	CUBA	7·80	CEYLON . .	5·
SUMATRA	34·	NEWFOUNDLAND .	7·50	SICILY . . .	2·20
NIPHON	19·50	NOVA ZEMBLA .	7·	SARDINIA .	2·
GREAT BRITAIN . . .	17·54	IRELAND	6·80	JAMAICA . .	1·33
CELEBES OF MACASSAR	14·50	TERRA DEL FUEGO	6·50	CYPRUS . .	1·
NEW ZEALAND, S°. Isl^{d}.	12·	ICELAND	6·25	CORSICA . .	·70
Ditto, N°. Isl^{d}.	11·	ST. DOMINGO . .	6·	CANDIA . .	·70

TABLE of the Length in Yards of ONE Minute of LONGITUDE and LATITUDE, being ONE Geographical or Nautical Mile ≐ 2025 Yards.

N.B. To obtain the number of Miles in a Degree, at any Latitude or Longitude, multiply the tabular numbers by 60 and divide by 1760; thus at the Equator the length of a Degree is 69·15 Miles of 1760 Yards each.

LATITUDE.	Min. of LONGITUDE.	Min. of LATITUDE.	LATITUDE.	Min. of LONGITUDE.	Min. of LATITUDE.	LATITUDE.	Min. of LONGITUDE.	Min. of LATITUDE.	LATITUDE.	Min. of LONGITUDE.	Min. of LATITUDE.
Deg.	Yards.	Yards.	Deg.	Yards.	Yards.	Deg.	Yards.	Yards.	Deg.	Yards.	Yards.
0°	2028·4	2028·4	28°	1792·4		45°	1436·6		59°	1047·2	2043·4
2	2027·2		30	1758·0		46	1411·4		60	1016·8	
4	2023·4		32	1721·8		47	1385·8	2039·4	61	986·0	
6	2017·4		34	1683·4		48	1359·8		62	954·8	
8	2008·8		35	1663·4	2035·0	49	1333·2		63	923·4	
10	1997·8		36	1643·0		50	1306·4		64	891·6	
12	1984·4	2029·26	37	1622·0		51	1279·0		65	859·6	2045·2
14	1968·6		38	1600·4		52	1251·4		66	827·4	
16	1950·4		39	1578·4		53	1223·4	2041·6	67	794·8	
18	1929·8		40	1556·0		54	1195·0		68	762·0	
20	1907·2		41	1533·0	2037·2	55	1166·0		69	729·0	
22	1881·8		42	1509·6		56	1136·8		70	695·8	
24	1854·0	2031·74	43	1485·8		57	1107·4				
26	1824·2		44	1461·4		58	1077·4				

ASTRONOMY.—PRINCIPAL ELEMENTS OF THE SOLAR SYSTEM.

Name of the Planet.	Diameter.			Volume.	Mass.		Density.	Weight at the Surface.	Light and Heat at Surface.	Rotation on Axis.
	In Miles.	Earth = 1.	Mean apparent from Earth.	Earth = 1.	Sun = 1.	Earth = 1.	Earth. = 1.	On Earth = 1.	On Earth = 1.	Mean Solar Time.
			′ ″							Days h. m.
☿ Mercury . .	3,100	0·391	0 6·9	0·060	1/[illegible]	0·073	2·94	1·15	6·67	0 24 5
♀ Venus . . .	7,800	0·985	0 16·9	0·957	1/[illegible]	0·885	0·923	0·91	1·91	0 23 21
⊕ Earth . . .	7,926	1·000		1·000	1/[illegible]	1·000	1·000	1·00	1·00	0 23 56
♂ Mars . . .	4,100	0·519	0 6·29	0·140	1/[illegible]	0·132	0·948	0·50	0·43	0 24 37
♃ Jupiter . .	88,900	11·225	0 36·74	1414·2	1/[illegible]	339·258	0·238	2·45	0·037	0 9 55
♄ Saturn . . .	79,100	9·932	0 16·20	734·8	1/[illegible]	101·524	0·138	1·09	0.011	0 10 30
♅ Uranus . .	34,400	4·344	0 4·0	82·0	1/[illegible]	16·928	0·180	1·05	0·003	
♆ Neptune . .	37,400	4·719	0 2·7	110·6	1/[illegible]	24·524	0·222	1·10	0·001	
☉ Sun	883,590	112·11	32 1·8	1409000·0	1.	355499·	0·252	28·36		25 12 0
☽ Moon . . .	2,160	0·272	31 7·0	0·0204	1/[illegible]	0·0121	0·685	0·163	1·00	27 7 43

MEMORANDA.—Newton's great law:

All particles of Matter throughout the whole Solar System and all space, gravitate towards each other with forces that are as their quantities of matter directly, and as the squares of their distances from each other reciprocally.

Kepler's three laws:

I. That the Orbit of each Planet is an ellipse, of which the Sun occupies one of the foci.

II. The Areas described about the Sun by the Radius Vector of the Planet are proportionate to the times employed in describing them.

III. The Squares of the times of sidereal revolutions of the Planets are to each other as the cubes of their mean distances.

Gravitation.—Its intensity increases as the squares of the distance decrease.

Inverse Square of Distance.—The attraction of one body for another at the distance of 2 miles is four times less than at the distance of 1 mile; at 3 miles it is nine times less than at 1; at 4 miles it is sixteen times less, and so on; that is, the gravitating force decreases in intensity as the squares of the distance increase.

☞ All the planets without exception, and almost all the satellites, move in one direction round the sun.

Out of thirty-six Comets which have had elliptic elements assigned to them, only five are retrograde, and of these only two, viz. Halley's and the Great Comet of 1843, can be regarded as satisfactorily made out.

ASTRONOMY.—PRINCIPAL ELEMENTS

	Name of the Planet.	Mean orbital Motion in a Solar Day.	Mean Sidereal Revolution in mean Solar Days.	Mean Distance from the Sun, or Semi-axis. Earth as Unity.	Ex-centricity of Orbit, in parts of Semi-axis.	Longitude of Perihelion.
			Days.			
☿	Mercury . . .	14732·419	87·96926	0·387 0985	0·2056 063	74 26 42
♀	Venus	5767·668	224·70080	0·723 3317	0·0068 618	128 43 6
⊕	Earth	3548·193	365·25637	1·000 0000	0·0167 9226	99 30 29
♂	Mars	1886·519	686·97964	1·523 691	0·0932 168	332 22 51
♃	Jupiter	299·129	4332·58482	5·202 798	0·0481 621	11 7 38
♄	Saturn	120·455	10759·2198	9·538 852	0·0561 505	89 8 20
♅	Uranus	42·233	30686·8205	19·182 73	0·0466 794	167 30 24
♆	Neptune . . .	21·554	60127·	30·04	0·0087 195	47 14 37
	The Asteroids.*					
8	Flora	1086·0790	1193·281	2·201 72	0·1567 97	32 49 45
43	Ariadne. . . .	1084·5185	1194·9983	2·203 83	0·1675 64	264 28 58
40	Harmonia . . .	1039·4094	1246·860	2·267 14	0·0460 84	2 1 51
18	Melpomene. . .	1020·0440	1270·531	2·295 75	0·2171 87	15 13 59
12	Victoria . . .	995·8340	1301·4193	2·332 81	0·2189 19	301 39 25
27	Euterpe . . .	986·6260	1313·5658	2·347 30	0·1728 96	87 39 0
4	Vesta	978·2852	1324·7670	2·360 63	0·0901 78	250 46 29
30	Urania	975·2077	1328·9446	2·365 59	0·1263 97	30 48 47
52	Nemausa . . .	974·6782	1329·6673	2·366 44	0·0663 95	175 27 22
7	Iris	963·1396	1345·600	2·385 31	0·2323 51	41 20 22
9	Metis	962·3317	1346·7272	2·386 64	0·1228 71	71 11 45
24	Phocea	953·6780	1358·9479	2·401 06	0·2525 32	302 46 9
20	Massalia . . .	948·7895	1365·9491	2·409 30	0·1438 33	98 36 35
42	Isis	946·9044	1368·6682	2·412 49	0·2126 62	318 6 53
44	Nysa	940·0778	1378·6067	2·424 16	0·1493 34	111 37 53
6	Hebe	939·3772	1379·635	2·425 36	0·2020 07	15 15 26
21	Lutetia	933·5550	1388·2357	2·435 44	0·1620 53	327 3 12
19	Fortuna . . .	930·1638	1393·3007	2·441 35	0·1579 26	30 21 50
11	Parthenope . .	924·3222	1402·1061	2·451 63	0·0996 26	316 3 7
17	Thetis	912·5926	1420·1300	2·472 59	0·1267 73	259 22 41
41	Daphne	903·0956	1435·0613	2·489 90	0·2153 60	231 5 43
46	Hestia	881·5370	1470·1607	2·530 33	0·1661 49	354 31 21
29	Amphitrite. . .	868·8694	1491·5910	2·554 86	0·0723 82	56 39 7
13	Egeria	857·7694	1510·8931	2·576 86	0·0891 12	119 45 7

The Sun's Diameter as seen from the Planets of our System.

From	☿	♀	⊕	♂	♃	♄	♅
	80′	46′	32′1″·8	21′	6′	3′	1′3″

The Passage of Light from the Sun to the Earth occupies 8′ 17″·8.

* 66 Asteroid Planets between Mars and Jupiter.

THE SOLAR SYSTEM——*continued.*

Mean Longitude of Epoch.	Longitude of Ascending Node.	Inclination of Orbit to the Ecliptic.	Epoch in Mean Time of Greenwich.	Name of Discoverer.	Date of Discovery.
112° 17′ 40″	45° 57′ 38″	7° 0′ 5″	1 Jan. 1800	ANCIENT.	
146 45 34	74 51 41	3 23 29	do.	do.	
100 53 53	0 0 0	0 0 0	do.	do.	
233 5 46	47 59 38	1 51 6	do.	do.	
81 55 8	98 25 45	1 18 52	do.	do.	
123 6 30	111 56 7	2 29 36	do.	do.	
173 30 37	72 59 21	0 46 28	do.	HERSCHEL.	13 March, 1781
335 8 58	130 6 52	1 46 59	1 Jan. 1850	LEVERRIER & ADAMS	23 Sept. 1846
174 46 12	110 20 53	5 53 3	24·0 March, 1852	HIND.	18 Oct. 1847
211 20 39	277 13 40	3 27 48	17·0 April, 1857	POGSON.	15 April, 1857
222 12 48	93 32 2	4 15 48	1·0 July, 1856	GOLDSCHMIDT.	31 March, 1856
351 42 29	150 0 56	10 9 2	0·0 Jan. 1853	HIND.	24 June, 1852
7 42 42	235 34 42	8 23 19	0·0 Jan. 1851	do.	13 Sept. 1850
260 44 9	93 44 35	1 35 31	14·0 June, 1859	do.	8 Nov. 1853
84 44 35	103 22 5	7 8 16	17·0 Dec. 1856	OLBERS.	29 March, 1807
26 28 52	308 11 6	2 5 56	0·0 Jan. 1855	HIND.	22 July, 1854
154 21 7	175 38 56	9 56 55	0·0 Jan. 1858	LAURENT.	22 Jan. 1858
85 45 12	259 44 5	5 28 16	8·0 June, 1852	HIND.	13 Aug. 1847
128 8 55	68 29 31	5 35 58	30·0 June, 1858	GRAHAM.	26 April, 1848
294 46 49	214 4 55	21 35 54	10·0 July, 1857	CHACORNAC.	6 April, 1853
323 52 41	206 42 29	0 41 7	22·0 Aug. 1859	DE GASPARIS. CHACORNAC.	19 Sept. 1852 20 ,, ,,
275 39 1	84 27 20	8 34 45	30·0 June, 1856	POGSON.	23 May, 1856
278 10 3	131 1 17	3 41 41	0·0 Jan. 1858	GOLDSCHMIDT.	27 May, 1857
47 26 29	138 31 55	14 46 32	13·0 July 1852	HENCKE.	1 July, 1847
41 24 37	80 27 57	3 5 9	2·0 Jan. 1853	GOLDSCHMIDT.	15 Nov. 1852
143 59 32	211 25 39	1 32 31	5·0 March, 1858	HIND.	22 Aug. 1852
57 27 15	125 1 1	4 37 1	10·0 Nov. 1855	DE GASPARIS.	11 May, 1850
214 30 46	125 25 55	5 35 28	21·0 April, 1856	LUTHER.	17 April, 1852
201 19 28	179 29 10	15 0 9	31·0 May, 1856	GOLDSCHMIDT.	22 May, 1856
197 16 17	181 26 47	2 17 49	25·5 March, 1860	POGSON.	16 Aug. 1857
293 11 56	356 26 52	6 7 50	9·0 July, 1859	MARTH.	1 March, 1854
144 56 43	43 17 34	16 32 14	19·0 Feb. 1856	DE GASPARIS.	2 Nov. 1850

The DIAMETERS of the PLANETS and MOON as seen from the SUN.

☿	♀	⊕	♂	♃	♄	♅	☽
16″	30″	17″·2	10″	37″	16″	4″	4″·6

☞ On 15 Sept. 1860, **60th Asteroid**, by FERGUSON, at Washington.
On 10 Feb. 1861, **63rd Asteroid**—ITALIA, by DE GASPARIS.

ASTRONOMY.—PRINCIPAL ELEMENTS O

	Name of the Planet.	Mean orbital Motion in a Solar Day.	Mean Sidereal Revolution in mean Solar Days.	Mean Distance from the Sun or Semi-axis, Earth as Unity.*	Ex-centricity of Orbit, in parts of Semi-axis.	Longitude of Perihelion.
	Asteroids—*cont.*	″	Days.			° ′ ″
5	Astrea . . .	857·4996	1511·369	2·577 40	0·1887 51	135 42 32
47	Pseudo-Daphne	854·4862	1516·6984	2·583 45	0·2265 40	294 49 57
14	Irene. . . .	853·5922	1518·2866	2·585 26	0·1687 13	178 51 11
32	Pomona . . .	852·8286	1519·6463	2·586 80	0·0824 49	194 21 30
59	Planet, 12 Sep. '60	843·7526	1534·9928	2·605 32	0·1963 17	337 52 24
54	Calypso . . .	840·0858	1542·6971	2·612 89	0·1802 50	94 38 20
23	Thalia . . .	833·8635	1554·2093	2·625 87	0·2359 37	123 11 57
37	Fides	826·1750	1568·6724	2·642 14	0·1748 92	66 4 34
15	Eunomia . . .	822·0764	1576·493	2·650 91	0·1893 39	27 13 24
51	Virginia. . .	822·0400	1576·5625	2·650 99	0·2871 49	173 29 6
26	Proserpine . .	819·6815	1581·0995	2·656 07	0·0875 21	235 17 27
3	Juno	813·9149	1592·3044	2·668 61	0·2565 38	54 9 41
58	Concordia . .	808·6390	1602·6907	2·680 20	0·0516 58	[illegible]6 30 0
34	Circe	805·2392	1609·4570	2·687 74	0·1056 22	14[illegible] 49 45
55	Alexandra . .	796·3781	1627·3734	2·707 65	0·1990 58	293 56 0
45	Eugenia . . .	790·3344	1639·8094	2·721 43	0·0824 27	230 2 0
38	Leda	784·1253	1656·6942	2·739 98	0·1555 25	100 44 31
36	Atalanta . .	778·0949	1665·6000	2·749 89	0·2981 71	42 23 48
56	Pandora . . .	773·8975	1674·6373	2·759 82	0·1420 85	11 26 7
1	Ceres	771·0839	1680·7515	2·766 54	0·0795 15	149 25 39
2	Pallas . . .	769·8142	1683·5231	2·769 58	0·2391 19	122 5 27
39	Lætitia . . .	769·3910	1684·4466	2·770 59	0·1110 23	2 3 7
28	Bellona . . .	767·5226	1688·5462	2·775 08	0·1546 81	122 18 20
33	Polymnia . .	732·1375	1770·1565	2·863 80	0·3377 53	340 42 33
43	Aglaia . . .	724·6771	1788·3794	2·883 42	0·1310 13	314 6 45
35	Leucothea . .	719·8253	1800·4342	2·896 36	0·1983 82	185 38 48
22	Calliope . . .	714·9083	1812·8167	2·909 62	0·1036 59	58 12 39
16	Psyche . . .	710·0572	1825·2021	2·922 86	0·1346 33	12 37 23
61	Danae . . .	691·5880	1873·9452	2·974 67	0·1630 84	340 8 37
50	Pales. . . .	654·5315	1980·0387	3·085 91	0·2378 04	32 50 40
53	Europa . . .	650·1127	1993·4978	3·099 88	0·1009 36	102 14 26
49	Doris . . .	648·6710	1997·9278	3·104 47	0·0758 01	77 37 41
62	Erato . . .	647·3010	2002·1560	3·108 85	0·1697 26	26 12 40
25	Themis . . .	637·2174	2033·8389	3·141 56	0·1226 58	134 20 19
10	Hygeia . . .	634·2404	2043·386	3·151 33	0·1009 15	228 2 29
31	Euphrosyne .	632·8023	2048·0294	3·156 16	0·2160 12	93 51 7
57	Mnémosyne. .	632·4631	2049·1276	3·157 28	0·1041 15	52 53 13

* The Semi-axis or Mean distance of the Earth from the Sun is 95 Millions of Miles.

THE SOLAR SYSTEM——*continued.*

Mean Longitude of Epoch.	Longitude of Ascending Node.	Inclination of Orbit to the Ecliptic.	Epoch in Mean Time of Greenwich.	Name of Discoverer.	Date of Discovery.
° ′ ″ 197 37 39	° ′ ″ 141 27 48	° ′ ″ 5 19 23	19·5 April, 1851	HENCKE.	8 Dec. 1845
331 0 42	194 50 13	7 56 51	13·5 Sept. 1857	GOLDSCHMIDT.	9 Sept. 1857
222 1 56	86 49 1	9 6 44	1·0 May, 1851	HIND.	19 May, 1851
57 35 35	220 52 28	5 29 3	5·0 Jan. 1855	GOLDSCHMIDT.	26 Oct. 1854
353 44 7	167 9 22	6 35 55	15·5 Sept. 1860	CHACORNAC.	12 Sept. 1860
169 52 29	143 29 56	5 3 39	27·0 April, 1858	LUTHER.	4 April, 1858
89 5 34	67 55 4	10 13 59	0·0 Jan. 1853	HIND.	15 Dec. 1852
42 35 43	8 9 44	3 7 11	16·0 Nov. 1755	LUTHER.	5 Oct. 1855
47 43 49	293 53 19	11 43 50	13·0 Oct. 1852	DE GASPARIS.	29 July, 1851
175 1 19	10 28 43	2 47 46	5·0 Oct. 1857	LUTHER.	19 Oct. 1857
181 23 10	45 53 15	3 35 40	20·0 March, 1857	do.	5 May, 1853
342 0 40	170 57 46	13 3 21	7·0 Aug. 1856	HARDING.	1 Sept. 1804
179 49 16	162 3 39	5 15 31	10·0 April, 1860	LUTHER.	10 April, 1860
257 34 21	184 49 8	5 26 32	17·0 June, 1860	CHACORNAC.	6 April, 1855
346 22 25	313 50 18	11 47 9	30·0 Dec. 1858	GOLDSCHMIDT.	10 Sept. 1858
294 35 7	148 5 53	6 34 58	0·0 Jan. 1858	do.	11 July, 1857
112 56 49	296 27 35	6 53 26	0·0 Jan. 1856	CHACORNAC.	12 Jan. 1856
36 21 36	359 9 29	18 42 9	0·0 Jan. 1856	GOLDSCHMIDT.	5 Oct. 1855
28 26 40	10 57 29	7 13 30	30·0 Dec. 1858	SEARLE.	10 Sept. 1858
146 44 36	80 48 25	10 36 28	15·0 Feb. 1857	PIAZZI.	1 Jan. 1801
119 18 8	172 38 28	34 42 41	22·0 Jan. 1857	OLBERS.	28 March, 1802
146 44 26	157 19 22	10 20 58	1·0 Jan. 1856	CHACORNAC.	8 Feb. 1856
159 2 10	144 42 58	9 22 33	0·0 March, 1854	LUTHER.	1 March, 1854
277 57 31	9 20 8	1 56 58	6·0 June, 1858	CHACORNAC.	28 Oct. 1854
83 47 2	4 16 58	5 0 0	5·0 Jan. 1859	LUTHER.	15 Sept. 1857
187 28 19	359 44 20	8 23 4	0·0 April, 1855	do.	19 April, 1855
77 0 15	66 36 56	13 44 52	0·0 Jan. 1853	HIND.	16 Nov. 1852
51 32 41	150 29 44	3 4 9	26·0 Nov. 1855	DE GASPARIS.	17 March, 1852
345 42 59	334 19 6	18 17 1	29·0 Sept. 1860	GOLDSCHMIDT.	9 Sept. 1860
10 31 26	290 30 48	3 8 31	0·0 Nov. 1858	do.	19 Sept. 1857
136 26 25	129 56 57	7 24 35	0·0 Jan. 1858	do.	6 Feb. 1858
9 55 13	185 14 2	6 29 43	0·0 Jan. 1858	do.	19 Sept. 1857
12 27 23	126 41 9	2 11 55	1·0 Oct. 1860	FORSTER & LESSER.	14 Sept. 1860
171 46 5	35 49 29	0 49 26	4·0 May, 1853	DE GASPARIS.	6 April, 1853
356 45 35	287 38 27	3 47 11	28·5 Sept. 1851	do.	14 April, 1849
53 50 14	31 25 23	26 25 12	0·0 Jan. 1855	FERGUSON.	1 Sept. 1854
28 35 49	200 5 25	15 8 2	1·0 Jan. 1859	LUTHER.	22 Sept. 1859

☞ On 5 and 9 March, 1861, the 64th (ANGELINA) and 65th Asteroid, by M. TEMPEL, at Marseilles.

ASTRONOMY.—*continued.*—SATELLITES.

Satellite of the EARTH. The MOON. (*1st Jan.* 1801, *Mean Time of Greenwich.*)

	days	h.	m.	s.
Mean Sidereal Revolution	27	7	43	11·5
Tropical ditto	27	7	43	4·7
Synodical ditto	29	12	44	2·9
Anomalistic ditto	27	13	18	37·4

	°	′	″
Mean Longitude of the Epoch	118	17	8·3
Longitude of Perigee	266	10	7·5
Longitude of Ascending Node	13	53	17·7
Inclination of Orbit to the Ecliptic	5	8	47·9
Mean Motion in Longitude in a Mean Day	13	10	35·03

Moon's Mean Distance from the Earth: 60·27 of the Earth's Equatorial Radii. About 238,800 Miles: Or $\frac{1}{400}$ of the Distance of the Earth from the Sun, which is 95 Millions of Miles.

Ex-centricity of Orbit .... 0·05491.

DIAMETER of the MOON = $\frac{3}{11}$ of the diameter of the EARTH.
VOLUME .... = $\frac{1}{49\cdot2}$ of the volume ditto.
MASS .... = $\frac{1}{81\cdot5}$ of the mass ditto.
DENSITY .... = $\frac{3}{5}$ of the density ditto.

SATELLITES OF JUPITER.

MEAN DISTANCE. The Semi-axis of Planet=1.		Mean Sidereal Revolution.	MASS. That of the Planet=1.
		days	
1st Satellite	6·049	1·7691	0·000 017
2nd ditto	9·623	3·5512	0·000 023
3rd ditto	15·350	7·1546	0·000 088
4th ditto	26·998	16·6888	0·000 043

SATELLITES OF SATURN.

MEAN DISTANCE. The Semi-axis of Planet=1.		Mean Sidereal Revolution.
		days
1st Satellite. . . .	3·35	·943
2nd ditto . . .	4·30	1·379
3rd ditto . . .	5·28	1·888
4th ditto . . .	6·82	2·739
5th ditto . . .	9·52	4·517
6th ditto . . .	22·08	15·945
7th ditto . . .	26·78	21·297
8th ditto . . .	64·36	79·330

SATELLITES OF URANUS.*

MEAN DISTANCE. The Semi-axis of Planet=1.		Mean Sidereal Revolution.
		days
1st Satellite . .	7·44	2·520
2nd ditto . .	10·37	4·144
3rd ditto . .	13·12	5·893
4th ditto . .	17·01	8·705
5th ditto . .	19·85	10·961
6th ditto . .	22·75	13·463
7th ditto . .	45·51	38·075
8th ditto . .	91·01	107·694

SATELLITE OF NEPTUNE.

MEAN DISTANCE.
About 12 Radii of the Planet.

Mean Sidereal Revolution . days 5·8769

* The Orbits of the Satellites of Uranus are inclined at an angle of about 79° to the Ecliptic, and the motions referred to the Ecliptic are *retrograde.*

A TABLE for the easy EXTRACTION of the ROOTS of PERFECT CUBE NUMBERS, not exceeding nine DIGITS.

The following Table affords a short and easy method of extracting the roots of numbers which are perfect cubes. It is of no real use, but is of some curiosity, as this, or some equivalent to it, enabled the American Calculating Boy as he was called, some thirty years ago, to astonish the Londoners by extracting the cube roots of numbers as far as nine digits almost instantly, and apparently by a mere mental operation. The principle is found in a disquisition of M. Rallier des Ourmes,

I.		II.		III.		IV.		V.	
CUBES.	ROOTS.	CUBES.	ROOTS.	CUBES.	ROOTS.	CUBES.	ROOTS.	CUBES.	ROOTS.
01	01			03	87				
11	71	12	08 or 58	13	17	04	34 or 84		
21	41			23	47				
31	11	32	18 or 68	33	77	24	24 or 74		05 – 25
41	81			43	07			25	45
51	51	52	28 or 78	53	37	44	14 or 64		65 – 85
61	21			63	67				15 – 35
71	91	72	38 or 88	73	97	64	04 or 54	75	55
81	61			83	27				75 – 95
91	31	92	48 or 98	93	57	84	94 or 44		

VI.		VII.		VIII.		IX.		CUBES OF NATURAL NUMBERS.	
CUBES.	ROOTS.	CUBES.	ROOTS.	CUBES.	ROOTS.	CUBES.	ROOTS.	CUBES.	ROOTS.
		07	43			09	69	1	1
16	06 or 56	17	73	08	02 or 52	19	39	8	2
		27	03			29	09	27	3
36	96 or 46	37	33	28	12 or 62	39	79	64	4
		47	63			49	49	125	5
56	86 or 36	57	93	48	22 or 72	59	19	216	6
		67	23			69	89	343	7
76	76 or 26	77	53	68	32 or 82	79	59	512	8
		87	83			89	29	729	9
96	66 or 16	97	13	88	42 or 92	99	99	1000	10

published long ago in the 'Académie des Sciences,'* and it is this—that in every perfect cube number, from the two last digits of the cube may always be found the two last digits of the root—with however some ambiguities in the cases where the cube either ends with 5 or with an even number. Every one knows that the first digit of the root is readily ascertained (where the cube exceeds six digits) by the number of millions in the cube. Therefore where the number of digits in the cube does not exceed nine, the root is easily found by the Table. Where the number of digits in the cube does not exceed six, there is no difficulty or ambiguity at all in any case.

Take as an example: the perfect cube 182284263. Here the cube of the natural number 5, viz. 125, is the one next below 182, the number of millions. And by the Table the cube ending 63 (see column III.) has a root ending 67. The answer therefore is 567. Again, to take an ambiguous case: cube 379503424. Here 343 is next below 379, the number of millions; therefore the first digit is 7. And on the Table (see column IV.) the cube ending 24 gives as the root $\overbrace{24 \text{ or } 74}$; the answer is either 724 or 774. We adopt the first, because 379, the number of millions, does not greatly exceed 343. Had the number been 479, we ought to have taken the last. The greatest difficulty, but not an insuperable one,† is in the case of cubes ending with 5.

The late Professor Woodhouse, after his attention had been directed to M. Rallier des Ourmes' dissertation by Mr. Baron Alderson, (then a young Barrister, who believed that it contained in substance a discovery of the American Boy's method of proceeding,) embodied the results of the Frenchman's calculations in this Tabular form, and thus made the matter quite simple. The test was afterwards applied, and the clever performance reduced to its proper limits. The supposed almost miraculous capacity of the Boy was however put an end to by the experiments.

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* M. Rallier des Ourmes was Honorary Counsellor of the Presidial Court of Rennes. His disquisition is published in the 5th vol. of the Foreign Mémoires of the Paris Académie des Sciences, and it is entitled 'A new Method of Division when the Dividend is the Multiple of the Divisor and may therefore be divided without a Remainder, and for the Extraction of Roots when the Power is perfect.'—See Euler's Algebra, vol. ii. p. 497, note 3.

† In this ambiguous case the following rule will facilitate the calculation:

If the cube ends with 625, and the first figure of the root as shown by the number of millions be odd, then the choice is to be made between 05, 45 and 85 only.

If it ends with 125, then between 65 and 25.

If the first figure of the root be even, the reverse is the case.

A similar rule applies to the case of the cube ending 75:

If the cube ends with 875, and the first figure of the root be odd, the choice is between 15, 55 and 95 only. If it ends with 375, then between 35 and 75 only.

And if the first figure of the root be even, the reverse is the case.

In like manner, by taking the three last digits of the cube into consideration, the ambiguity in the roots ending with even numbers would wholly vanish; but the Table would become long and complicated, and these ambiguities do not present any real difficulty in practice.

NEW SUCCESSION AND LEGACY DUTY.

TABLE I.

Value of ANNUITIES chargeable with DUTY, calculated according to the Table in 16 & 17 Vict. c. 51, from **1** to **90** Years of Age.

TABLE II.

Showing the DUTIES payable on SUCCESSIONS, LEGACIES, ANNUITIES, RESIDUES, &c. under the Statute 16 & 17 Vict. c. 51.

TABLE III.

Showing the Amount of ANNUAL INCOME arising from RESIDUE, &c. calculated at **4** ℔ Cent., being the rate at which it is estimated at the Legacy Duty Office.

TABLE IV.

Showing the AMOUNTS of SUCCESSIONS, LEGACIES, ANNUITIES, RESIDUES, &c. which produce each progressive PENNY in a Shilling of Duty at the Several Rates fixed by 16 & 17 Vict. c. 51.

TABLE V.

Showing the Values of an ANNUITY of £100 per Annum, for any Number of Years not exceeding **95**, according to the Table in 16 & 17 Vict. c. 51.

"The Customs and Inland Revenue Act, 1881."

Passed 3rd June, 1881. 40 Vict. cap. 12.

Clause XXVII. On and after 1st June, 1881, when the personal estate shall be above the value of £100, and not above £500, the probate duty will be payable at the rate of £1 for every full sum of £50, and for any fractional part of £50. When such estate shall be above the value of £500, and not above £1000, at the rate of £1 5s. for every full sum of £50, and for any fractional part of £50. When such estate shall be above the value of £1000, at the rate of £3 for every full sum of £100, and for any fractional part of £100.

XXVIII. Power to deduct debts and funeral expenses when deceased died domiciled in the United Kingdom.

XXIX. Affidavit of persons applying for Probate, or Letters of Administration, to extend to investigation of account. The Affidavit and Schedule to be in accordance with the forms prescribed by the Commissioners of Inland Revenue.

XXX. Probate or Letters of Administration to bear a Certificate that the Affidavit for the Commissioners of Inland Revenue had been delivered, and that same is duly stamped, and stating the amount of the gross value of estate and effects shown by the Account.

XXXI. Provides for return of Duty overpaid.

XXXII. Provides for the Payment of further Duty.

XXXIII. When Personal Estate is under £300, Duty 15s., with further payment of 30s. if over £100.

XXXIV. Directs that Clause XXXIII. shall apply to Inventories in Scotland under £300.

XXXV. Provides for further charge for Legacy Duty in cases over £300.

XXXVI. Relief from Legacy Duty in cases under £300.

XXXIX. Accounts to be delivered on oath within six months after death of the deceased.

XLI. Legacy and Succession Duty at £1 per cent. remitted.

XLII. Legacies under £20 made liable to Duty.

XLIII. Power to Commissioners to accept Composition for Legacy Duty under a Will.

XLVII. Stamp Duties of One Penny may be denoted by Postage Stamps, and *vice versâ*.

Mr. Gladstone's "Succession Duty Act, 1853."

Passed 4th August, 1853. 16 & 17 Vict. cap. 51.

Clause X. The Scale of Duties payable under this Act is the same as that fixed by 55 Geo. III. c. 184, according to the relationship of the party, viz.:

If Child of the Deceased, or any Descendant of a Child of the Deceased, or the Father or Mother or any lineal Ancestor of the Deceased	1 ₩ Cent.
If Brother or Sister of the Deceased, or any Descendant of a Brother or Sister of the Deceased	3 ₩ Cent.
If Brother or Sister of the Father or Mother of the Deceased, or any Descendant of a Brother or Sister of the Father or Mother of the Deceased	5 ₩ Cent.
If Brother or Sister of a Grandfather or Grandmother of the Deceased, or any Descendant of a Brother or Sister of a Grandfather or Grandmother of the Deceased	6 ₩ Cent.
If the Party be in any other Degree of Collateral Consanguinity to the Deceased, or a Stranger in Blood to the Deceased	10 ₩ Cent.*

XI. When a Succession devolves or a Legacy is given to either a Husband or Wife, the amount of Duty is to be calculated according to the rate payable by the one who is the nearest relation.

XVI. A Succession subject to Trusts for charitable or public purposes is chargeable with Duty at the rate of 10 per cent. on the amount or value of such Property.

XIX. Leaseholds of every denomination are liable to Duty under the Succession Duty Act, and no longer under the Legacy Duty Acts.

XXI. The Interest of every Successor in Real Property is considered to be the Value of an Annuity, equal to the current value of such Property, during the residue of his life, or for any less period during which he shall be entitled thereto.

The Duty is to be paid by 8 equal Half-yearly Instalments, to commence at the end of 12 months from the date of becoming so entitled to the beneficial enjoyment.

XXXI. Cancels the Tables in the Legacy Duty Act 36 Geo. III. cap. 52, and directs that the Calculations be made by the Tables annexed to this Act.

XL. The Duty may be paid in advance, and Discount allowed at the rate of 4 per cent. per annum.

LIV. The commencement of this Act to date from 19th May, 1853.

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* The following appear to be the Exemptions.

Husband or Wife of the Deceased, } *by Clause* 21 *of* 36 Geo. III. cap. 52.
The Royal Family,

And certain Specific Legacies, given to Bodies Corporate or other Public Bodies, exempted from Duty by 39 Geo. III. c. 73. *See Schedule,* 55 Geo. III. cap. 184.

Also by the 18*th Clause of* 16 & 17 Vict. c. 51, *when the whole of the Successions are under* £100; *or when each individual Succession is under* £20, *as in the Legacy Duty Act.* *See also* 2nd Clause, 36 Geo. III. cap. 52.

Value of ANNUITIES chargeable with DUTY, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 100 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in SUCCESSION and LEGACY DUTY TABLE II.

Amount of Annuity. £ s.	Value of Annuity. Age 1. £ s. d.	Value of Annuity. Age 2. £ s. d.	Value of Annuity. Age 3. £ s. d.	Value of Annuity. Age 4. £ s. d.	Value of Annuity. Age 5. £ s. d.
– 1	– 19 [illegible]	– 19 [illegible]	– 19 [illegible]	– 19 [illegible]	– 19 3
– 5	4 15 [illegible]	4 15 11	4 16 [illegible]	4 15 [illegible]	4 15 4
– 10	9 10 7½	9 11 1	9 12 [illegible]	9 12 1[illegible]	9 12 9½
1 0	19 1 3½	19 2 9	19 4 [illegible]	19 5 9	19 5 1
2 0	38 2 7½	38 7 7½	38 10 [illegible]	38 11 6	38 11 [illegible]
3 0	57 3 11½	57 12 [illegible]	57 15 [illegible]	57 17 [illegible]	57 18 [illegible]
4 0	76 5 2½	76 [illegible]	77 1 1½	77 3 [illegible]	77 1 1½
5 0	95 6 7½	96 [illegible]	96 6 [illegible]	96 8 9	96 4 11
6 0	114 7 11½	115 2 11	115 11 6	115 14 [illegible]	115 [illegible]
7 0	133 9 3½	134 6 [illegible]	134 16 11	135 0 3½	134 17 5
8 0	152 10 7½	153 10 6½	154 [illegible]	154 6 [illegible]	154 [illegible] 1½
9 0	171 11 11	172 [illegible] 1	173 [illegible]	173 11 1[illegible]	173 [illegible]
10 0	190 13 [illegible]	191 [illegible]	192 12 [illegible]	192 17 7	192 15 11
20 0	381 [illegible]	383 16 [illegible]	385 5 [illegible]	385 17 2	385 7 10½
30 0	571 [illegible]	575 14 7	578 [illegible]	[illegible]	[illegible]
40 0	[illegible] 2½	767 [illegible]	770 11 [illegible]	[illegible]	[illegible]
50 0	[illegible] 4 6	959 11 0	963 4 0	[illegible] 8 [illegible]	[illegible] 9
60 0	1143 19 9½	1151 9 2½	[illegible]	[illegible]	[illegible]
70 0	1334 13 2	1343 [illegible]	[illegible]	[illegible]	[illegible]
80 0	1525 6 [illegible]	1535 5 7	[illegible]	[illegible] 0 [illegible]	[illegible]
90 0	[illegible]	[illegible]	[illegible]	[illegible] 18 [illegible]	[illegible] 5 6½
100 0	[illegible] 15 [illegible]	[illegible]	1926 6 [illegible]	[illegible]	[illegible] 19 [illegible]
1000 0	£19066. 10s.	£19191	£19264	£19288	[illegible]

Amount of Annuity. £ s.	Age 6. £ s. d.	Age 7. £ s. d.	Age 8. £ s. d.	Age 9. £ s. d.	Age 10. £ s. d.
– 1	– 19 2½	– 19 1½	– 19 0½	– 18 10½	– 18 9½
– 5	4 16 [illegible]	4 15 7½	4 15 [illegible]	4 14 6½	4 13 [illegible]
– 10	9 12 [illegible]	9 11 3½	9 10 [illegible]	9 9 [illegible]	9 7 5½
1 0	19 1 [illegible]	19 [illegible]	19 [illegible]	18 18 [illegible]	18 15 7
2 0	38 8 [illegible]	38 [illegible]	38 1 [illegible]	37 16 1	37 11 [illegible]
3 0	57 12 [illegible]	57 1 11	57 1 8½	56 11 7	[illegible]
4 0	76 17 [illegible]	76 16 6½	76 [illegible]	75 12 [illegible]	75 [illegible] 6
5 0	95 1 [illegible]	95 11 [illegible]	95 [illegible]	94 16 11½	[illegible] 18 [illegible]
6 0	115 5 11	114 15 [illegible]	114 [illegible]	113 9 2	112 13 [illegible]
7 0	134 10 [illegible]	133 18 6	133 3 11½	132 7 [illegible]	[illegible]
8 0	153 14 6½	153 [illegible]	152 4 6	151 5 6½	[illegible]
9 0	172 [illegible]	172 7 [illegible]	171 5 1	170 [illegible] 9	[illegible] 0 8
10 0	192 [illegible]	191 6 [illegible]	190 [illegible]	189 1 11½	[illegible]
20 0	384 [illegible]	382 12 10½	380 11 [illegible]	378 3 10½	[illegible] 7
30 0	576 9 7	573 [illegible]	571 [illegible]	567 [illegible]	[illegible]
40 0	768 12 [illegible]	[illegible]	761 [illegible] 7	756 7 [illegible]	751 5 [illegible]
50 0	[illegible]	[illegible] 12 [illegible]	951 8 4	[illegible]	[illegible] 1 6
60 0	1152 10 2½	1147 18 8½	1141 [illegible] 10½	1134 16 8½	1126 17 9½
70 0	1345 2 4½	[illegible] 5 [illegible]	1331 1[illegible]	[illegible] 7½	[illegible] 11 [illegible]
80 0	1537 [illegible] 7	[illegible] 11 [illegible]	[illegible] 2½	1512 [illegible] 7	[illegible] 1 [illegible]
90 0	1729 9 9½	1721 18 0½	1712 11 10	1701 17 6½	1690 6 8½
100 0	1921 12 0	1913 4 6	1902 16 6	1890 19 1	1878 [illegible] 6
1000 0	£19216	£19132. 5s.	£19028. 5s.	£18909. 15s.	£18781. 10s.

Value of Annuities chargeable with Duty, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 90 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in Succession and Legacy Duty Table II.

Amount of Annuity.	Value of Annuity. Age 11.	Value of Annuity. Age 12.	Value of Annuity. Age 13.	Value of Annuity. Age 14.	Value of Annuity. Age 15.
£. s.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
– 1	– 18 7½	– 18 5¾	– 18 4	– 18 2	– 18 0
– 5	4 13 2½	4 12 5¾	4 11 8½	4 10 10¾	4 10 0¼
– 10	9 6 5	9 4 11½	9 3 4½	9 1 8¾	9 0 0½
1 0	18 12 10¼	18 9 11	18 6 9¼	18 3 5¼	18 0 1
2 0	37 5 8¾	36 19 10	36 13 6¾	36 6 11¼	36 0 2
3 0	55 18 7½	55 9 9	55 0 4½	54 10 5	54 0 3
4 0	74 11 5¾	73 19 8	73 7 1½	72 13 10¾	72 0 4
5 0	93 4 4	92 9 7	91 13 11	90 17 4½	90 0 5
6 0	111 17 2½	110 19 6	110 0 8½	109 0 10	108 0 6
7 0	130 10 1	129 9 5½	128 7 5¾	127 4 3¾	126 0 7
8 0	149 2 11½	147 19 4½	146 14 3½	145 7 9½	144 0 8
9 0	167 15 9¾	166 9 3¼	165 1 0¾	163 11 3¼	162 0 9
10 0	186 8 8¼	184 19 2¼	183 7 10	181 14 9	180 0 10
20 0	372 17 4¾	369 18 4¾	366 15 8½	363 9 6	360 1 8½
30 0	559 6 1	554 17 7	550 3 6½	545 4 3	540 2 6½
40 0	745 14 9½	739 16 9½	733 11 4¾	726 19 0	720 3 4¾
50 0	932 3 6	924 16 0	916 19 3	908 13 9	900 4 3
60 0	1118 12 2¼	1109 15 2¼	1100 7 1	1090 8 6	1080 5 1
70 0	1305 0 10¾	1294 14 4¾	1283 14 11½	1272 3 3	1260 5 11½
80 0	1491 9 7	1479 13 7	1467 2 9½	1453 18 0	1440 6 9½
90 0	1677 18 3½	1664 12 9½	1650 10 7¾	1635 12 9	1620 7 7¾
100 0	1864 7 0	1849 12 0	1833 18 6	1817 7 6	1800 8 6
1000 0	£18643. 10s.	£18496	£18339. 5s.	£18173. 15s.	£18004. 5s.
	Age 16.	Age 17.	Age 18.	Age 19.	Age 20.
– 1	– 17 10	– 17 8	– 17 6¼	– 17 4¾	– 17 3½
– 5	4 9 2	4 8 4½	4 7 7¾	4 7 0¼	4 6 5½
– 10	8 18 4½	8 16 9¼	8 15 3¾	8 14 0½	8 12 11½
1 0	17 16 8¾	17 13 6½	17 10 7¾	17 8 1¼	17 5 10½
2 0	35 13 5½	35 7 1¼	35 1 3½	34 16 2½	34 11 9¼
3 0	53 10 2¼	53 0 8	52 11 11½	52 4 3¾	51 17 8
4 0	71 6 11	70 14 2¾	70 2 7¼	69 12 5¼	69 3 6¾
5 0	89 3 7¾	88 7 9½	87 13 3¼	87 0 6½	86 9 5½
6 0	107 0 4½	106 1 4¼	105 3 11	104 8 7¾	103 15 4½
7 0	124 17 1½	123 14 11	122 14 7	121 16 9	121 1 3
8 0	142 13 10	141 8 5¾	140 5 2¾	139 4 10½	138 7 1¾
9 0	160 10 6¾	159 2 0¼	157 15 10½	156 12 11¾	155 13 0½
10 0	178 7 3½	176 15 7	175 6 6½	174 1 1	172 18 11¼
20 0	356 14 7	353 11 2¼	350 13 1	348 2 2¼	345 17 10¾
30 0	535 1 10¾	530 6 9½	525 19 7¾	522 3 3½	518 16 10
40 0	713 9 2¼	707 2 4¾	701 6 2¼	696 4 4¾	691 15 9½
50 0	891 16 6	883 18 0	876 12 9	870 5 6	864 14 9
60 0	1070 3 9½	1060 13 7	1051 19 3½	1044 6 7	1037 13 8½
70 0	1248 11 1	1237 9 2¼	1227 5 10	1218 7 8¼	1210 12 7¾
80 0	1426 18 4¾	1414 4 9½	1402 12 4¾	1392 8 9½	1383 11 7
90 0	1605 5 8¼	1591 0 4¾	1577 18 11¼	1566 9 10¾	1556 10 6½
100 0	1783 13 0	1767 16 0	1753 5 6	1740 11 0	1729 9 6
1000 0	£17836. 10s.	£17678	£17532. 15s.	£17405. 10s.	£17294. 15s.

Value of ANNUITIES chargeable with DUTY, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 90 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in SUCCESSION and LEGACY DUTY TABLE II.

AMOUNT of ANNUITY.	VALUE of ANNUITY. Age 21.	VALUE of ANNUITY. Age 22.	VALUE of ANNUITY. Age 23.	VALUE of ANNUITY. Age 24.	VALUE of ANNUITY. Age 25.
£. s.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
— 1	— 17 2¼	— 17 1¼	— 17 0¾	— 17 0	— 16 11¼
— 5	4 5 11½	4 5 7¼	4 5 4	4 5 0¾	4 4 9¼
— 10	8 11 11¾	8 11 2½	8 10 8	8 10 0¾	8 9 6½
1 0	17 3 11½	17 2 3½	17 1 4½	17 0 1½	16 18 9¼
2 0	34 7 11½	34 5 2½	34 2 9¾	34 0 2¾	33 17 7
3 0	51 11 10¾	51 7 9¾	51 4 1	51 0 4	50 16 4¾
4 0	68 15 10¼	68 10 5¼	68 5 5¼	68 0 5¼	67 15 2¼
5 0	85 19 10	85 12 9¼	85 6 9¼	85 0 6¾	84 14 0
6 0	103 3 9¾	102 15 7¾	102 8 2¼	102 0 8¼	101 12 9½
7 0	120 7 9¼	119 18 2	119 9 6¾	119 0 9¼	118 11 7
8 0	137 11 9	136 18 10¾	136 10 11	136 0 11	135 10 4¾
9 0	154 15 8¾	154 3 5½	153 12 3¼	153 1 0¾	152 9 2¼
10 0	171 19 8½	171 6 3	170 13 7½	170 1 1¼	169 8 0
20 0	343 19 4¾	342 12 2½	341 7 3½	340 2 2¼	338 16 0
30 0	515 19 1	513 18 3¾	512 0 10¾	510 3 3¾	508 4 0
40 0	687 18 9½	685 4 4¾	682 14 7	680 4 7	677 12 0
50 0	859 18 6	856 10 6	853 8 3	850 5 9	847 0 0
60 0	1031 18 2¼	1027 16 7	1024 1 10¾	1020 6 10¾	1016 8 0
70 0	1203 17 10¾	1199 2 8¼	1194 15 6¼	1190 8 6¼	1185 16 0
80 0	1375 17 7	1370 8 9¼	1365 9 2¼	1360 9 3¼	1355 4 0
90 0	1547 17 3½	1541 14 10¾	1536 2 10	1530 10 4	1524 12 0
100 0	1719 17 0	1713 1 0	1706 16 6	1700 11 6	1694 0 0
1000 0	£17198. 10s.	£17130. 10s.	£17068. 5s.	£17005. 15s.	£16940

	Age 26	Age 27	Age 28	Age 29	Age 30
— 1	— 16 10¾	— 16 9¼	— 16 8	— 16 6¾	— 16 5¼
— 5	4 4 4	4 3 10¾	4 3 4	4 2 9¾	4 2 3¼
— 10	8 8 8	8 7 9¼	8 6 8¼	8 5 7¼	8 4 5½
1 0	16 17 4	16 15 5½	16 13 4½	16 11 2¾	16 8 10¾
2 0	33 14 8¼	33 10 10¾	33 6 9¼	33 2 5	32 17 9
3 0	50 12 0¾	50 6 4¼	50 0 2¼	49 13 7¾	49 6 7½
4 0	67 9 4½	67 1 9½	66 13 3½	66 4 10	65 15 6
5 0	84 6 8¾	83 17 3½	83 7 6¾	82 16 0¾	82 4 4½
6 0	101 4 0¾	100 12 8¾	100 0 4¾	99 7 3	98 13 3
7 0	118 1 4¾	117 8 2	116 13 10¼	115 19 5½	115 2 1¾
8 0	134 18 9	131 3 7½	133 7 5½	132 9 8	131 11 0
9 0	151 16 1½	150 19 1	150 0 8¾	149 0 10¾	147 19 10¾
10 0	168 13 5½	167 14 6½	166 14 1	165 12 1	164 8 9
20 0	337 6 10¾	335 9 1	333 8 2¼	331 4 2¼	328 17 6
30 0	506 0 4	503 3 7¾	500 2 3¼	496 16 3¼	493 6 3
40 0	674 13 9¼	670 18 2½	666 16 4¼	662 8 4¼	657 15 0
50 0	843 7 3	838 12 9	833 10 5	828 0 6	822 3 9
60 0	1012 0 8½	1006 7 3½	1000 4 7	993 12 7	986 12 6
70 0	1180 14 1¾	1174 1 10	1166 18 8¼	1159 4 8¼	1151 1 3
80 0	1349 7 7	1341 16 4½	1333 12 9¼	1324 16 8½	1315 10 0
90 0	1518 1 0¾	1509 10 11½	1500 6 10½	1490 8 10½	1479 18 9
100 0	1686 14 6	1677 5 6	1667 1 0	1656 1 0	1644 7 6
1000 0	£16867. 5s.	£16772. 15s.	£16670. 10s.	£16560. 10s.	£16443. 15s.

Value of ANNUITIES chargeable with DUTY, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 90 years of Age.

The Amount of Duty to be paid on the Value shown by this Table may be seen in SUCCESSION and LEGACY DUTY TABLE II.

AMOUNT of ANNUITY.	VALUE of ANNUITY. Age 31.	VALUE of ANNUITY. Age 32.	VALUE of ANNUITY. Age 33.	VALUE of ANNUITY. Age 34.	VALUE of ANNUITY. Age 35.
£. s.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
– 1	– 16 3¾	– 16 2¼	– 16 0½	– 15 10¾	– 15 8¾
– 5	4 1 7	4 0 11½	4 0 3	3 19 6½	3 18 8¾
– 10	8 3 2¼	8 1 10¾	8 0 6	7 19 0½	7 17 5¾
1 0	16 6 4¾	16 3 9½	16 1 0½	15 18 1	15 14 11½
2 0	32 12 9¼	32 7 7¼	32 2 0¾	31 16 2¼	31 9 11¼
3 0	48 19 2¼	48 11 4¾	48 3 1½	47 14 3½	47 4 11
4 0	65 5 7	64 15 2½	64 4 1¾	63 12 4½	62 19 10¾
5 0	81 12 0	80 19 0½	80 5 2½	79 10 5½	78 14 10½
6 0	97 18 4¾	97 2 9¾	96 6 2¾	95 8 6¾	94 9 10
7 0	114 4 9½	113 6 7½	112 7 3½	111 6 7¾	110 4 9¾
8 0	130 11 2¼	129 10 5¼	128 8 3¾	127 4 9	125 19 9½
9 0	146 17 7	145 14 2¾	144 9 4½	143 2 10½	141 14 9¼
10 0	163 4 0	161 18 0½	160 10 4¾	159 0 11½	157 9 9
20 0	326 8 0	323 16 1	321 0 9½	318 1 10¾	314 19 6
30 0	489 12 0	485 14 1¾	481 11 2¼	477 2 10	472 9 3
40 0	652 16 0	647 12 2¼	642 1 7	636 3 9½	629 19 0
50 0	816 0 0	809 10 3	802 12 0	795 4 9	787 8 9
60 0	979 4 0	971 8 3½	963 2 4¾	954 5 8½	944 18 6
70 0	1142 8 0	1133 6 4	1123 12 9¼	1113 6 7¾	1102 8 3
80 0	1305 12 0	1295 4 4¾	1284 3 2¼	1272 7 7	1259 18 0
90 0	1468 16 0	1457 2 5¼	1444 13 7	1431 8 6½	1417 7 9
100 0	1632 0 0	1619 0 6	1605 4 0	1590 9 6	1574 17 6
1000 0	£16320	£16190. 5s.	£16052	£15904. 15s.	£15748. 15s.

	Age 36.	Age 37.	Age 38.	Age 39.	Age 40.
– 1	– 15 7	– 15 4¾	– 15 2¾	– 15 0½	– 14 10½
– 5	3 17 11	3 17 0¾	3 16 2¼	3 15 3½	3 14 4½
– 10	7 15 10	7 14 1¾	7 12 4¾	7 10 7¼	7 8 9
1 0	15 11 8¼	15 8 3½	15 4 9½	15 1 2½	14 17 6
2 0	31 3 4½	30 16 7¼	30 9 7	30 2 5	29 15 0
3 0	46 15 1	46 4 10¾	45 14 4¾	45 3 7½	44 12 6
4 0	62 6 9¼	61 13 2½	60 19 2¼	60 4 10¼	59 10 0
5 0	77 18 5½	77 1 6¼	76 4 0	75 6 0¾	74 7 6
6 0	93 10 2	92 9 9¾	91 8 9½	90 7 3¼	89 5 0
7 0	109 1 10½	107 18 1½	106 13 7	105 8 6	104 2 6
8 0	124 13 6½	123 6 5¼	121 18 4¾	120 9 8½	119 0 0
9 0	140 5 3	138 14 8¾	137 3 2¼	135 10 11	133 17 6
10 0	155 16 11½	154 3 0½	152 8 0	150 12 1¾	148 15 0
20 0	311 13 10¾	308 6 1	304 16 0	301 4 3¼	297 10 0
30 0	467 10 10	462 9 1¾	457 4 0	451 16 5¼	446 5 0
40 0	623 7 9½	616 12 2¼	609 12 0	602 8 7	595 0 0
50 0	779 4 9	770 15 3	762 0 0	753 0 9	743 15 0
60 0	935 1 8¼	924 18 3½	914 8 0	903 12 10¾	892 10 0
70 0	1090 18 7¾	1079 1 4	1066 16 0	1054 5 0½	1041 5 0
80 0	1246 15 7	1233 4 4¾	1219 4 0	1204 17 2¼	1190 0 0
90 0	1402 12 6½	1387 7 5¼	1371 12 0	1355 9 4	1338 15 0
100 0	1558 9 6	1541 10 6	1524 0 0	1506 1 6	1487 10 0
1000 0	£15584. 15s.	£15415. 5s.	£15240	£15060. 15s.	£14875

Value of Annuities chargeable with Duty, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 90 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in Succession and Legacy Duty Table II.

Amount of Annuity.	Value of Annuity. Age 41.	Value of Annuity. Age 42.	Value of Annuity. Age 43.	Value of Annuity. Age 44.	Value of Annuity. Age 45.
£ s.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
– 1	– 14 8	– 14 5½	– 14 3	– 14 0¾	– 13 9½
– 5	3 13 4¾	3 12 4½	3 11 3½	3 10 2	3 8 11¾
– 10	7 6 9¾	7 4 9	7 2 7½	7 0 4	6 17 11½
1 0	14 13 7½	14 9 6	14 5 2½	14 0 8¾	13 15 11¼
2 0	29 7 3¼	28 19 0¼	28 10 5¼	28 1 4¾	27 11 10½
3 0	44 0 11	43 8 6½	42 15 7¾	42 2 1	41 7 10
4 0	58 14 6½	57 18 0½	57 0 10½	56 2 9½	55 3 9¼
5 0	73 8 2¼	72 7 6¾	71 6 1	70 3 6	68 19 8½
6 0	88 1 10	86 17 1	85 11 3¾	84 4 2¼	82 15 8
7 0	102 15 5¾	101 6 7¼	99 16 6¼	98 4 10¾	96 11 7¼
8 0	117 9 1½	115 16 1¼	114 1 9	112 5 7	110 7 6½
9 0	132 2 9	130 5 7½	128 6 11¾	126 6 3½	124 3 6
10 0	146 16 4¾	144 15 1¾	142 12 2½	140 7 0	137 19 5¼
20 0	293 12 9½	289 10 3½	285 4 4¾	280 14 0	275 18 10¾
30 0	440 9 2¼	434 5 5¼	427 16 7	421 1 0	413 18 4
40 0	587 5 7	579 0 7	570 8 9½	561 8 0	551 17 9½
50 0	734 2 0	723 15 9	713 1 0	701 15 0	689 17 3
60 0	880 18 4¾	868 10 10¾	855 13 2½	842 2 0	827 16 8¼
70 0	1027 14 9½	1013 6 0½	998 5 4¾	982 9 0	965 16 1¾
80 0	1174 11 2¼	1158 1 2¼	1140 17 7	1122 16 0	1103 15 7
90 0	1321 7 7	1302 16 4	1283 9 9½	1263 3 0	1241 15 0½
100 0	1468 4 0	1447 11 6	1426 2 0	1403 10 0	1379 14 6
1000 0	£14682	£14475. 15s.	£14261	£14035	£13797. 5s.
	Age 46.	Age 47.	Age 48.	Age 49.	Age 50.
– 1	– 13 6½	– 13 3¼	– 13 0	– 12 8½	– 12 5
– 5	3 7 8¾	3 6 4¾	3 5 0¼	3 3 7	3 2 1¾
– 10	6 15 5¾	6 12 9¾	6 10 0½	6 7 2½	6 4 3½
1 0	13 10 11½	13 5 7½	13 0 1	12 14 4½	12 8 7
2 0	27 1 11	26 11 3	26 0 2¼	25 8 9¼	24 17 2¼
3 0	40 12 10½	39 16 10½	39 0 3¼	38 3 2	37 5 9¼
4 0	54 3 10¼	53 2 6	52 0 4½	50 17 6¾	49 14 4½
5 0	67 14 9¾	66 8 1¼	65 0 5½	63 11 11½	62 2 11½
6 0	81 5 9¼	79 13 9	78 0 6¾	76 6 4¼	74 11 6¾
7 0	94 16 9	92 19 4½	91 0 7¾	89 0 9	87 0 1¾
8 0	108 7 8½	106 5 0	104 0 9	101 15 1¾	99 8 9
9 0	121 18 8	119 10 7½	117 0 10¼	114 9 6½	111 17 4¼
10 0	135 9 7¾	132 16 3	130 0 11½	127 3 11½	124 5 11½
20 0	270 19 3½	265 12 6	260 1 10¾	254 7 10¾	248 11 10¾
30 0	406 8 11¼	398 8 9	390 2 10	381 11 10	372 17 10
40 0	541 18 7	531 5 0	520 3 9½	508 15 9½	497 3 9½
50 0	677 8 3	664 1 3	650 4 9	635 19 9	621 9 9
60 0	812 17 10¾	796 17 6	780 5 8¼	763 3 8¼	745 15 8¼
70 0	948 7 6½	929 13 9	910 6 7¾	890 7 7¾	870 1 7¾
80 0	1083 17 2¼	1062 10 0	1040 7 7	1017 11 7	994 7 7
90 0	1219 6 10	1195 6 3	1170 8 6½	1144 15 6½	1118 13 6½
100 0	1354 16 6	1328 2 6	1300 9 6	1271 19 6	1242 19 6
1000 0	£13548. 5s.	£13281. 5s.	£13004. 15s.	£12719. 15s.	£12429. 15s.

Value of Annuities chargeable with Duty, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 90 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in Succession and Legacy Duty Table II.

Amount of Annuity.	Value of Annuity. Age 51.	Value of Annuity. Age 52.	Value of Annuity. Age 53.	Value of Annuity. Age 54.	Value of Annuity. Age 55.
£. s.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
– 1	– 12 1½	– 11 10½	– 11 6¾	– 11 3¼	– 11 0¼
– 5	3 0 8¼	2 19 3½	2 17 10½	2 16 6¼	2 15 2¼
– 10	6 1 4½	5 18 6¾	5 15 9¼	5 13 0¾	5 10 4½
1 0	12 2 9	11 17 1½	11 11 6¾	11 6 1½	11 0 9½
2 0	24 5 6¼	23 14 3½	23 3 1¼	22 12 3	22 1 6¼
3 0	36 8 3½	35 11 5	34 14 8½	33 18 4½	33 2 4
4 0	48 11 0¾	47 8 6½	46 6 3½	45 4 6	44 3 1½
5 0	60 13 10	59 5 8¼	57 17 10½	56 10 7¾	55 3 10¾
6 0	72 16 7½	71 2 10	69 9 5¼	67 16 9½	66 4 8
7 0	84 19 4½	82 19 11¾	81 1 0¼	79 2 10¾	77 5 5½
8 0	97 2 1¾	94 17 1¼	92 12 7	90 9 0¼	88 6 2¼
9 0	109 4 11	106 14 3	104 4 2	101 15 2	99 7 0
10 0	121 7 8½	118 11 4¾	115 15 9	113 1 3½	110 7 9½
20 0	242 15 4¾	237 2 9½	231 11 6	226 2 7	220 15 7
30 0	364 3 1	355 14 2¼	347 7 3	339 3 10¾	331 3 4¾
40 0	485 10 9½	474 5 7	463 3 0	452 5 2½	441 11 2¼
50 0	606 18 6	592 17 0	578 18 9	565 6 6	551 19 0
60 0	728 6 2½	711 8 4¾	694 14 6	678 7 9½	662 6 9½
70 0	849 13 10¾	829 19 9½	810 10 3	791 9 1	772 14 7
80 0	971 1 7	948 11 2¼	926 6 0	904 10 4¾	883 2 4¾
90 0	1092 9 3½	1067 2 7	1042 1 9	1017 11 8½	993 10 2½
100 0	1213 17 0	1185 14 0	1157 17 6	1130 13 0	1103 18 0
1000 0	£12138. 10s.	£11857	£11578. 15s.	£11306. 10s.	£11039
	Age 56.	Age 57.	Age 58.	Age 59.	Age 60.
– 1	– 10 9¼	– 10 6	– 10 3	– 9 11¾	– 9 8½
– 5	2 13 10¼	2 12 6¾	2 11 3½	2 9 11½	2 8 7
– 10	5 7 9	5 5 1¾	5 2 6½	4 19 10¾	4 17 2½
1 0	10 15 6	10 10 3½	10 5 1	9 19 9½	9 14 4½
2 0	21 11 0	21 0 7	20 10 2¼	19 19 7¼	19 8 9¾
3 0	32 6 6	31 10 10¾	30 15 3½	29 19 5	29 3 2¾
4 0	43 2 0	42 1 2¼	41 0 4¾	39 19 2¾	38 17 7½
5 0	53 17 6	52 11 6	51 5 6	49 19 0½	48 12 0½
6 0	64 13 0	63 1 9½	61 10 7	59 18 10¼	58 6 5½
7 0	75 8 6	73 12 1	71 15 8½	69 18 8	68 0 10¼
8 0	86 4 0	84 2 4¾	82 0 9½	79 18 5¾	77 15 3½
9 0	96 19 6	94 12 8¼	92 5 10¾	89 18 3¼	87 9 8¼
10 0	107 15 0	105 3 0	102 11 0	99 18 1	97 4 1
20 0	215 10 0	210 6 0	205 2 0	199 16 2½	194 8 2½
30 0	323 5 0	315 9 0	307 13 0	299 14 3½	291 12 3½
40 0	431 0 0	420 12 0	410 4 0	399 12 4¾	388 16 4¾
50 0	538 15 0	525 15 0	512 15 0	499 10 6	486 0 6
60 0	646 10 0	630 18 0	615 6 0	599 8 7	583 4 7
70 0	754 5 0	736 1 0	717 17 0	699 6 8½	680 8 8½
80 0	862 0 0	841 4 0	820 8 0	799 4 9½	777 12 9½
90 0	969 15 0	946 7 0	922 19 0	899 2 10¾	874 16 10¾
100 0	1077 10 0	1051 10 0	1025 10 0	999 1 0	972 1 0
1000 0	£10775	£10515	£10255	£9990. 10s.	£9720. 10s.

Value of Annuities chargeable with Duty, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 90 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in Succession and Legacy Duty Table II.

Amount of Annuity.		Value of Annuity. Age 61.			Value of Annuity. Age 62.			Value of Annuity. Age 63.			Value of Annuity. Age 64.			Value of Annuity. Age 65.		
£.	s.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
–	1	–	9	5½	–	9	1½	–	8	9¾	–	8	6¼	–	8	2½
–	5	2	7	2¼	2	5	8¼	2	4	1¾	2	2	7¼	2	1	0¾
–	10	4	14	4½	4	11	4¾	4	8	3¾	4	5	2¾	4	2	1¼
1	0	9	8	9	9	2	9¾	8	16	7¼	8	10	5¾	8	4	3¾
2	0	18	17	6	18	5	7½	17	13	3¾	17	0	11¾	16	8	7¼
3	0	28	6	3	27	8	5½	26	9	11¾	25	11	5½	24	12	11½
4	0	37	15	0	36	11	3¼	35	6	7½	34	1	11½	32	17	3½
5	0	47	3	9¼	45	14	1	44	3	3½	42	12	5¼	41	1	7½
6	0	56	12	6¼	54	16	11	52	19	11½	51	2	11¼	49	5	11¼
7	0	66	1	3¼	63	19	8¾	61	16	7¼	59	13	5	57	10	3¼
8	0	75	10	0¼	73	2	6½	70	13	3¼	68	3	11	65	14	7
9	0	84	18	9½	82	5	4½	79	9	11¼	76	14	4¾	73	18	11
10	0	94	7	6½	91	8	2¼	88	6	7	85	4	10¾	82	3	3
20	0	188	15	1	182	16	4¾	176	13	2¼	170	9	9½	164	6	6
30	0	283	2	7¾	274	4	7	264	19	9½	255	14	8¼	246	9	9
40	0	377	10	2¼	365	12	9½	353	6	4¾	340	19	7	328	13	0
50	0	471	17	9	457	1	0	441	13	0	426	4	6	410	16	3
60	0	566	5	3½	548	9	2½	529	19	7	511	9	4¾	492	19	6
70	0	660	12	10	639	17	4¾	618	6	2¼	596	14	3½	575	2	9
80	0	755	0	4¾	731	5	7	706	12	9½	681	19	2¼	657	6	0
90	0	849	7	11½	822	13	9½	794	19	4¾	767	4	1	739	9	3
100	0	943	15	6	914	2	0	883	6	0	852	9	0	821	12	6
1000	0	£9437. 15s.			£9141			£8833			£8524. 10s.			£8216. 5s.		

		Age 66.			Age 67.			Age 68.			Age 69.			Age 70.		
–	1	–	7	10¾	–	7	7¼	–	7	4	–	7	0½	–	6	9¼
–	5	1	19	6¼	1	18	1	1	16	8	1	15	3	1	13	10¼
–	10	3	19	0¾	3	16	2¼	3	13	4	3	10	6	3	7	8¾
1	0	7	18	1¾	7	12	4½	7	6	8	7	1	0½	6	15	5¾
2	0	15	16	3½	15	4	9¼	14	13	4¼	14	2	0¾	13	10	11¾
3	0	23	14	5¼	22	17	2	22	0	0½	21	3	1½	20	6	5½
4	0	31	12	7	30	9	6½	29	6	8¾	28	4	1¾	27	1	11½
5	0	39	10	9	38	1	11¼	36	13	5	35	5	2½	33	17	5½
6	0	47	8	10¾	45	14	4	44	0	1¼	42	6	2¾	40	12	11¼
7	0	55	7	0½	53	6	8¾	51	6	9½	49	7	3¼	47	8	5
8	0	63	5	2¼	60	19	1¼	58	13	5¾	56	8	3¾	54	3	11
9	0	71	3	4	68	11	6	66	0	1¾	63	9	4½	60	19	4¾
10	0	79	1	6	76	3	10¾	73	6	10	70	10	4¾	67	14	10¾
20	0	158	3	0	152	7	9½	146	13	8¼	141	0	9½	135	9	9½
30	0	237	4	6	228	11	8¼	220	0	6½	211	11	2¼	203	4	8¼
40	0	316	6	0	304	15	7	293	7	4¾	282	1	7	270	19	7
50	0	395	7	6	380	19	6	366	14	3	352	12	0	338	14	6
60	0	474	9	0	457	3	4¾	440	1	1	423	2	4¾	406	9	4¾
70	0	553	10	6	533	7	3½	513	7	11¼	493	12	9½	474	4	3½
80	0	632	12	0	609	11	2½	586	14	9½	564	3	2½	541	19	2¼
90	0	711	13	6	685	15	1	660	1	7¾	634	13	7	609	14	1
100	0	790	15	0	761	19	0	733	8	6	705	4	0	677	9	0
1000	0	£7907. 10s.			£7619. 10s.			£7334. 5s.			£7052			£6774. 10s.		

Value of Annuities chargeable with Duty, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 100 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in Succession and Legacy Duty Table II.

Amount of Annuity	Value of Annuity. Age 71.	Value of Annuity. Age 72.	Value of Annuity. Age 73.	Value of Annuity. Age 74.	Value of Annuity. Age 75.
£ s.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
— 1	— 6 6	— 6 7½	— 5 11½	— 5 3½	— 5 4½
— 5	1 12 6	1 11 7½	1 9 10½	1 9 5½	1 7 0½
— 10	3 5 0½	3 3 4½	2 19 9½	2 16 11½	2 14 1
1 0	6 10 0½	6 4 9½	5 19 7½	5 13 11	5 8 2½
2 0	13 0 1½	12 9 7	11 18 11½	11 7 10½	10 16 4½
3 0	19 10 2½	18 14 4½	17 18 5	17 1 9½	16 4 7½
4 0	26 0 2½	24 19 2	23 17 10½	22 15 8½	21 12 9½
5 0	32 10 4½	31 3 11½	29 17 4½	28 9 7½	27 1 0½
6 0	39 0 5½	37 8 9	35 16 10	34 3 6½	32 9 2½
7 0	45 10 6½	43 13 6½	41 16 3½	39 17 6	37 17 5
8 0	52 0 7½	49 18 4½	47 15 9½	45 11 5½	43 5 7½
9 0	58 10 8½	56 3 1½	53 15 2½	51 5 4½	48 13 10
10 0	65 0 9½	62 7 11½	59 14 9	56 19 3½	54 2 0½
20 0	130 1 7	124 15 10½	119 9 6	113 18 7	108 4 1
30 0	195 2 4½	187 3 10	179 4 3	170 17 10½	162 6 1½
40 0	260 3 2½	249 11 9½	238 19 0	227 17 2½	216 8 2½
50 0	325 4 0	311 19 9	298 13 9	284 16 6	270 10 3
60 0	390 4 9½	374 7 8½	358 8 6	341 15 9½	324 12 3½
70 0	455 5 7	436 15 7½	418 3 3	398 15 1	378 14 4
80 0	520 6 4½	499 3 7	477 18 0	455 14 4½	432 16 4½
90 0	585 7 2½	561 11 6½	537 12 9	512 13 8½	486 18 5½
100 0	650 8 0	623 19 6	597 7 6	569 13 0	541 0 6
1000 0	£6504.	£6239.15s.	£5973.15s.	£5696.10s.	£5410.5s.

Amount of Annuity	Age 76.	Age 77.	Age 78.	Age 79.	Age 80.
— 1	— 5 1½	— 4 9½	— 4 5½	— 4 1½	— 3 9½
— 5	1 5 6½	1 3 10½	1 2 2½	1 0 7½	— 19 0½
— 10	2 11 1½	2 7 9½	2 4 5½	2 1 2½	1 18 1
1 0	5 2 3½	4 15 6½	4 8 10½	4 2 5½	3 16 2½
2 0	10 4 7	9 11 1½	8 17 9½	8 4 11½	7 12 5
3 0	15 6 10½	14 6 8½	13 6 8	12 7 5½	11 8 7½
4 0	20 9 2	19 2 2½	17 15 6½	16 9 11½	15 4 10
5 0	25 11 5½	23 17 10	22 4 5½	20 12 5½	19 1 0½
6 0	30 13 9	28 13 5	26 13 4½	24 14 11½	22 17 3
7 0	35 16 0½	33 8 11¼	31 2 3	28 17 5½	26 13 5½
8 0	40 18 4½	38 4 6½	35 11 1½	32 19 11½	30 9 8
9 0	46 0 7½	43 0 1½	40 0 0½	37 2 5½	34 5 10½
10 0	51 2 11½	47 15 8½	44 8 11½	41 4 11½	38 2 1
20 0	102 5 10½	95 11 4½	88 17 10½	82 9 10½	76 4 2
30 0	153 8 10	143 7 1	133 6 10	123 14 10	114 6 3½
40 0	204 11 9½	191 2 9½	177 15 9½	164 19 9½	152 8 4½
50 0	255 14 9	238 18 6	222 4 9	206 4 9	190 10 6
60 0	306 17 9½	286 14 2½	266 13 8½	247 9 8½	228 12 7
70 0	358 0 7½	334 9 10½	311 2 7½	288 14 7½	266 14 8
80 0	409 3 7	382 5 7	355 11 7	329 19 7	304 16 9½
90 0	460 6 6½	430 1 3½	400 0 6½	371 4 6½	342 18 10½
100 0	511 9 6	477 17 0	444 9 6	412 9 6	381 1 0
1000 0	£5114.15s.	£4778.10s.	£4447.15s.	£4124.15s.	£3810.10s.

Value of ANNUITIES chargeable with DUTY, calculated according to the Table in 16 & 17 Vict. c. 51, from 1 to 90 years of Age.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in SUCCESSION and LEGACY DUTY TABLE II.

AMOUNT of ANNUITY.	VALUE of ANNUITY. Age 81.	VALUE of ANNUITY. Age 82.	VALUE of ANNUITY. Age 83.	VALUE of ANNUITY. Age 84.	VALUE of ANNUITY. Age 85.
£. s.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
– 1	– 3 6	– 3 2½	– 2 11	– 2 7½	– 2 4
– 5	– 17 6¼	– 16 1	– 14 7½	– 13 1¾	– 11 8¾
– 10	1 15 0¾	1 12 2	1 9 3	1 6 3½	1 3 5¾
1 0	3 10 1½	3 4 4	2 18 6	2 12 7¼	2 6 11¾
2 0	7 0 3¼	6 8 8½	5 17 0	5 5 2¾	4 13 11½
3 0	10 10 5	9 13 0¼	8 15 6	7 17 10¼	7 0 11¼
4 0	14 0 6¾	12 17 4½	11 14 0	10 10 5¾	9 7 11¼
5 0	17 10 8½	16 1 8½	14 12 6	13 3 1	11 14 11
6 0	21 0 10½	19 6 0¾	17 11 0	15 15 8½	14 1 10¾
7 0	24 11 0	22 10 4¾	20 9 6	18 8 4	16 8 10½
8 0	28 1 1¾	25 14 9	23 8 0	21 0 11½	18 15 10½
9 0	31 11 3½	28 19 1¼	26 6 6	23 13 6¾	21 2 10¼
10 0	35 1 5½	32 3 5½	29 5 0	26 6 2¼	23 9 10
20 0	70 2 10¾	64 6 10¾	58 10 0	52 12 4¾	46 19 8½
30 0	105 4 4	96 10 4	87 15 0	78 18 7	70 9 6½
40 0	140 5 9½	128 13 9½	117 0 0	105 4 9½	93 19 4¾
50 0	175 7 3	160 17 3	146 5 0	131 11 0	117 9 3
60 0	210 8 8½	193 0 8½	175 10 0	157 17 2¼	140 19 1
70 0	245 10 1¾	225 4 1¾	204 15 0	184 3 4¾	164 8 11½
80 0	280 11 7	257 7 7	234 0 0	210 9 7	187 18 9½
90 0	315 13 0½	289 11 0½	263 5 0	236 15 9½	211 8 7¾
100 0	350 14 6	321 14 6	292 10 0	263 2 0	234 18 6
1000 0	£3507. 5s.	£3217. 5s.	£2925	£2631	£2349. 5s.

	Age 86.	Age 87.	Age 88.	Age 89.	Age 90.
– 1	– 2 0¾	– 1 10	– 1 7¾	– 1 5¾	– 1 4
– 5	– 10 4½	– 9 2½	– 8 2¾	– 7 5	– 6 8
– 10	1 0 9¼	– 18 5¼	– 16 5¾	– 14 10	– 13 4
1 0	2 1 6½	1 16 10¾	1 12 11½	1 9 8	1 6 8½
2 0	4 3 1¼	3 13 9¾	3 5 11½	2 19 4	2 13 4½
3 0	6 4 8	5 10 8¾	4 18 11	4 9 0	4 0 0¾
4 0	8 6 2¾	7 7 7¾	6 11 10¾	5 18 8	5 6 9
5 0	10 7 9½	9 4 6¾	8 4 10½	7 8 4	6 13 5½
6 0	12 9 4¼	11 1 5¾	9 17 10	8 18 0	8 0 1½
7 0	14 10 11	12 18 4¾	11 10 9¾	10 7 8½	9 6 9¾
8 0	16 12 5¾	14 15 3¾	13 3 9½	11 17 4½	10 13 6
9 0	18 14 0¼	16 12 2¾	14 16 9¼	13 7 0½	12 0 2½
10 0	20 15 7	18 9 1¾	16 9 9	14 16 8½	13 6 10¾
20 0	41 11 2¼	36 18 3½	32 19 6	29 13 4¾	26 13 9½
30 0	62 6 9½	55 7 5¼	49 9 3	44 10 1	40 0 8¼
40 0	83 2 4¾	73 16 7	65 19 0	59 6 9½	53 7 7
50 0	103 18 0	92 5 9	82 8 9	74 3 6	66 14 6
60 0	124 13 7	110 14 10¾	98 18 6	89 0 2¼	80 1 4¾
70 0	145 9 2½	129 4 0½	115 8 3	103 16 10¾	93 8 3½
80 0	166 4 9½	147 13 2¼	131 18 0	118 13 7	106 15 2¼
90 0	187 0 4¾	166 2 4	148 7 9	133 10 3½	120 2 1
100 0	207 16 0	184 11 6	164 17 6	148 7 0	133 9 0
1000 0	£2078	£1845. 15s.	£1648. 15s.	£1483. 10s.	£1334. 10s.

TABLE showing the DUTIES payable on SUCCESSIONS, LEGACIES, ANNUITIES, RESIDUES, &c. under the STATUTE 16 & 17 Vict. c. 51.

AMOUNT OF SUCCESSION, LEGACY, &c.	AMOUNT OF DUTY at 1 ℗ Cent.	AMOUNT OF DUTY at 3 ℗ Cent.	AMOUNT OF DUTY at 5 ℗ Cent.	AMOUNT OF DUTY at 6 ℗ Cent.	AMOUNT OF DUTY at 10 ℗ Cent.
£. s.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
— 1	— — [illegible]	— — [illegible]	— — [illegible]	— — [illegible]	— — 1¼
— 2	— — [illegible]	— — [illegible]	— — 1¼	— — 1½	— — 2½
— 3	— — [illegible]	— — 1	— — 1¾	— — 2	— — 3¾
— 4	— — [illegible]	— — 1½	— — 2½	— — 3	— — 4¾
— 5	— — [illegible]	— — 1¾	— — 3	— — 3½	— — 6
— 10	— — 1¼	— — 3¾	— — 6	— — 7¼	— 1 0
— 15	— — 1¾	— — 5½	— — 9	— — 10¾	— 1 6
1 0	— — 2½	— — 7¼	— 1 0	— 1 2½	— 2 0
2 0	— — 4¾	— 1 2½	— 2 0	— 2 4¾	— 4 0
3 0	— — 7¼	— 1 9¾	— 3 0	— 3 7¼	— 6 0
4 0	— — 9½	— 2 4¾	— 4 0	— 4 9½	— 8 0
5 0	— 1 0	— 3 0	— 5 0	— 6 0	— 10 0
6 0	— 1 2½	— 3 7¼	— 6 0	— 7 2½	— 12 0
7 0	— 1 4¾	— 4 2¼	— 7 0	— 8 4¾	— 14 0
8 0	— 1 7¼	— 4 9½	— 8 0	— 9 7¼	— 16 0
9 0	— 1 9½	— 5 4¾	— 9 0	— 10 9½	— 18 0
10 0	— 2 0	— 6 0	— 10 0	— 12 0	1 0 0
20 0	— 4 0	— 12 0	1 0 0	1 4 0	2 0 0
30 0	— 6 0	— 18 0	1 10 0	1 16 0	3 0 0
40 0	— 8 0	1 4 0	2 0 0	2 8 0	4 0 0
50 0	— 10 0	1 10 0	2 10 0	3 0 0	5 0 0
60 0	— 12 0	1 16 0	3 0 0	3 12 0	6 0 0
70 0	— 14 0	2 2 0	3 10 0	4 4 0	7 0 0
80 0	— 16 0	2 8 0	4 0 0	4 16 0	8 0 0
90 0	— 18 0	2 14 0	4 10 0	5 8 0	9 0 0
100 0	1 0 0	3 0 0	5 0 0	6 0 0	10 0 0
200 0	2 0 0	6 0 0	10 0 0	12 0 0	20 0 0
300 0	3 0 0	9 0 0	15 0 0	18 0 0	30 0 0
400 0	4 0 0	12 0 0	20 0 0	24 0 0	40 0 0
500 0	5 0 0	15 0 0	25 0 0	30 0 0	50 0 0
600 0	6 0 0	18 0 0	30 0 0	36 0 0	60 0 0
700 0	7 0 0	21 0 0	35 0 0	42 0 0	70 0 0
800 0	8 0 0	24 0 0	40 0 0	48 0 0	80 0 0
900 0	9 0 0	27 0 0	45 0 0	54 0 0	90 0 0
1000 0	10 0 0	30 0 0	50 0 0	60 0 0	100 0 0
2000 0	20 0 0	60 0 0	100 0 0	120 0 0	200 0 0
3000 0	30 0 0	90 0 0	150 0 0	180 0 0	300 0 0
4000 0	40 0 0	120 0 0	200 0 0	240 0 0	400 0 0
5000 0	50 0 0	150 0 0	250 0 0	300 0 0	500 0 0
6000 0	60 0 0	180 0 0	300 0 0	360 0 0	600 0 0
7000 0	70 0 0	210 0 0	350 0 0	420 0 0	700 0 0
8000 0	80 0 0	240 0 0	400 0 0	480 0 0	800 0 0
9000 0	90 0 0	270 0 0	450 0 0	540 0 0	900 0 0
10000 0	100 0 0	300 0 0	500 0 0	600 0 0	1000 0 0

Table showing the Amount of Annual Income arising from Residues, &c. calculated at 4 ℘ cent., being the rate at which it is estimated at the Legacy Duty Office.

Amount of Residue, &c.			Income at 4 ℘ Cent.		Amount of Residue, &c.			Income at 4 ℘ Cent.			Amount of Residue, &c.			Income at 4 ℘ Cent.		
£.	s.	d.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
–	1	–	–	0½	20	–	–	0	16	–	2000	–	–	80	–	–
–	2	–	–	1	30	–	–	1	4	–	3000	–	–	120	–	–
–	3	–	–	1¼	40	–	–	1	12	–	4000	–	–	160	–	–
–	4	–	–	2	50	–	–	2	0	–	5000	–	–	200	–	–
–	5	–	–	2½	60	–	–	2	8	–	6000	–	–	240	–	–
–	10	–	–	4¾	70	–	–	2	16	–	7000	–	–	280	–	–
–	15	–	–	7¼	80	–	–	3	4	–	8000	–	–	320	–	–
1	0	–	–	9½	90	–	–	3	12	–	9000	–	–	360	–	–
2	0	–	1	7¼	100	–	–	4	0	–	10000	–	–	400	–	–
3	0	–	2	4¾	200	–	–	8	0	–						
4	0	–	3	2½	300	–	–	12	0	–						
5	0	–	4	0	400	–	–	16	0	–						
6	0	–	4	9½	500	–	–	20	0	–						
7	0	–	5	7¼	600	–	–	24	0	–						
8	0	–	6	4¾	700	–	–	28	0	–						
9	0	–	7	2½	800	–	–	32	0	–						
10	0	–	8	0	900	–	–	36	0	–						
					1000	–	–	40	0	–						

SUCCESSION AND LEGACY DUTY—TABLE IV.

Table showing the Amounts of Successions, Legacies, Annuities, Residues, &c. which produce each progressive Penny in a Shilling of Duty at the several Rates fixed by 16 & 17 Vict. c. 51.

☞ It is not the practice of the Legacy Duty Office to charge the Duty on sums which yield less than One Penny of Duty.

Amount of Duty.		Amounts of Successions, Legacies, Annuities, Residues, &c. on which the Duty in the first column is payable.															Amount of Duty.	
		1 ℘ Cent.			3 ℘ Cent.			5 ℘ Cent.			6 ℘ Cent.		10 ℘ Cent.					
s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	s.	d.	s.	d.			s.	d.
–	1	–	8	4	–	2	9⅓	–	1	8	1	4⅔	–	10			–	1
–	2	–	16	8	–	5	6⅔	–	3	4	2	9⅓	1	8			–	2
–	3	1	5	0	–	8	4	–	5	0	4	2	2	6			–	3
–	4	1	13	4	–	11	1⅓	–	6	8	5	6⅔	3	4			–	4
–	5	2	1	8	–	13	10⅔	–	8	4	6	11⅓	4	2			–	5
–	6	2	10	0	–	16	8	–	10	0	8	4	5	0			–	6
–	7	2	18	4	–	19	5⅓	–	11	8	9	8⅔	5	10			–	7
–	8	3	6	8	1	2	2⅔	–	13	4	11	1⅓	6	8			–	8
–	9	3	15	0	1	5	0	–	15	0	12	6	7	6			–	9
–	10	4	3	4	1	7	9⅓	–	16	8	13	10⅔	8	4			–	10
–	11	4	11	8	1	10	6⅔	–	18	4	15	3⅓	9	2			–	11
1	0	5	0	0	1	13	4	1	0	0	16	8	10	0			1	0

TABLE showing the Values of an ANNUITY of £100 per Annum, for any Number of Years not exceeding 95, according to the Table in 16 & 17 Vict. c. 51.

☞ The Amount of Duty to be paid on the Value shown by this Table may be seen in SUCCESSION and LEGACY DUTY TABLE II.

YEARS.	VALUES.			YEARS.	VALUES.		
	£.	s.	d.		£.	s.	d.
1	96	3	–	49	2134	2	6
2	188	12	–	50	2148	4	0
3	277	10	–	51	2161	14	6
4	362	19	6	52	2174	15	0
5	445	3	6	53	2187	5	0
6	524	4	0	54	2199	5	6
7	600	4	0	55	2210	17	0
8	673	5	0	56	2221	19	6
9	743	10	6	57	2232	13	0
10	811	1	6	58	2242	19	0
11	876	0	6	59	2252	16	6
12	938	10	0	60	2262	6	6
13	998	11	0	61	2271	9	6
14	1056	6	0	62	2280	5	6
15	1111	16	6	63	2288	14	6
16	1165	4	6	64	2296	17	0
17	1216	11	0	65	2304	13	0
18	1265	18	6	66	2312	3	6
19	1313	7	6	67	2319	8	0
20	1359	0	6	68	2326	7	0
21	1402	18	0	69	2333	0	6
22	1445	2	0	70	2339	9	0
23	1485	13	6	71	2345	12	6
24	1524	13	6	72	2351	11	0
25	1562	4	0	73	2357	5	0
26	1598	5	6	74	2362	15	0
27	1632	19	0	75	2368	0	6
28	1666	6	0	76	2373	2	0
29	1698	7	0	77	2377	19	6
30	1729	4	0	78	2382	13	6
31	1758	16	6	79	2387	4	0
32	1787	7	0	80	2391	10	6
33	1814	15	0	81	2395	14	0
34	1841	2	0	82	2399	14	0
35	1866	9	0	83	2403	11	6
36	1890	16	6	84	2407	5	6
37	1914	5	0	85	2410	17	0
38	1936	15	6	86	2414	5	6
39	1958	8	6	87	2417	11	6
40	1979	5	6	88	2420	14	6
41	1999	6	0	89	2423	15	6
42	2018	11	0	90	2426	14	6
43	2037	1	6	91	2429	10	6
44	2054	17	6	92	2432	5	0
45	2072	0	0	93	2434	17	0
46	2088	9	0	94	2437	7	0
47	2104	5	6	95	2439	15	6
48	2119	10	0				

SUCCESSION DUTY.—EXAMPLE.

To ascertain the amount of DUTY payable by a person inheriting an ESTATE of the Annual Value of £1085; the Inheritor being the SON of the Deceased, and aged **31** years.

By TABLE I. will be seen the Value of an ANNUITY of £1085, on a Life aged **31**.

For £1000	–	–	£16,320	–	–
80	–	–	1,305	12	0
5	–	–	81	12	0
£1085	–	–	£17,707	4	–

The DUTY on £17,707. 4s., by TABLE II., for a SON of the Deceased, at 1 ℔ cent. is as follows:

For £10,000	–	–	£100	–	–
7,000	–	–	70	–	–
700	–	–	7	–	–
7	–	–	–	1	4¾
–	4	–	–	–	0½
£17,707	4	–	£177	1	5¼

To be paid by 8 Half-yearly Payments of £22. 2s. 8d., to commence at the expiration of the first year.

Vide 21st Clause, 16 & 17 Vict. c. 51.

LEGACY DUTY.—EXAMPLE.

To ascertain the amount of Duty on INCOME, arising from RESIDUE, &c. payable by way of ANNUITY.

Suppose the amount of RESIDUE, &c. to be £2350, and the person entitled to the Annual Income to be a *Brother* of the Deceased, aged **40**.

The INCOME would be, by TABLE III.,

For £2000	–	–	£80	–	–
300	–	–	12	–	–
50	–	–	2	–	–
£2350	–	–	£94	–	–

The Value of an ANNUITY for that amount, viz. £94, on the Life of a person aged **40**, is, according to TABLE I.,

For £90	–	–	£1338	15	–
4	–	–	59	10	–
£94	–	–	£1398	5	–

The DUTY on £1398. 5s., by TABLE II., for a *Brother* of the Deceased, at 3 ℔ cent. is as follows:

For £1000	–	–	£30	–	–
300	–	–	9	–	–
90	–	–	2	14	–
8	–	–	0	4	9½
0	5	–	0	0	1¾
£1398	5	–	£41	18	11¼

To be paid at the expiration of the first year, or by 4 Annual Payments of £10. 9s. 9d.

Vide 8th Clause, 36 Geo. III. c. 52.

A SECULAR DIARY

For ascertaining the DAY OF THE WEEK on which any event took place from the commencement of the NEW STYLE, 3rd Sept. 1752, which, by adding 11 days, became the 14th Sept. 1752 (*vide* 24 Geo. II. c. 23), up to the present time, and continued forward as far as the year 1900.

TABLE OF YEARS.

	1761 1767 1778 1789 1795 1801 1807 1818	1762 1773 1779 1790 1802 1813 1819	1757 1763 1774 1785 1791 1803 1814 1825	1754 1765 1771 1782 1793 1799 1805 1811 1822	1755 1766 1777 1783 1794 1800 1806 1817 1823	1752 1758 1769 1775 1786 1797 1809 1815 1826	1753 1759 1770 1781 1787 1798 1810 1821 1827
Jan.	4	5	6	2	3	7	1
Feb.	7	1	2	5	6	3	4
Mar.	7	1	2	5	6	3	4
April	3	4	5	1	2	6	7
May	5	6	7	3	4	1	2
June	1	2	3	6	7	4	5
July	3	4	5	1	2	6	7
Aug.	6	7	1	4	5	2	3
Sept.	2	3	4	7	1	5	6
Oct.	4	5	6	2	3	7	1
Nov.	7	1	2	5	6	3	4
Dec.	2	3	4	7	1	5	6
	1829 1835 1846 1857 1863 1874 1885 1891	1830 1841 1847 1858 1869 1875 1886 1897	1831 1842 1853 1859 1870 1881 1887 1898	1833 1839 1850 1861 1867 1878 1889 1895	1834 1845 1851 1862 1873 1879 1890	1837 1843 1854 1865 1871 1882 1893 1899	1838 1849 1855 1866 1877 1883 1894 1900

IN LEAP YEARS, FEBRUARY 29 DAYS.

	1764 1792 1804	1768 1796 1808	1772 1812	1776 1816	1780 1820	1756 1784 1824	1760 1788 1828
Jan.	7	5	3	1	6	4	2
Feb.	3	1	6	4	2	7	5
Mar.	4	2	7	5	3	1	6
April	7	5	3	1	6	4	2
May	2	7	5	3	1	6	4
June	5	3	1	6	4	2	7
July	7	5	3	1	6	4	2
Aug.	3	1	6	4	2	7	5
Sept.	6	4	2	7	5	3	1
Oct.	1	6	4	2	7	5	3
Nov.	4	2	7	5	3	1	6
Dec.	6	4	2	7	5	3	1
	1832 1860 1888	1836 1864 1892	1840 1868 1896	1844 1872	1848 1876	1852 1880	1856 1884

TABLE OF THE DAYS OF THE WEEK FOR EACH DAY OF THE MONTH.

	1	2	3	4	5	6	7
Monday	1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	31 3 10 17 24	30 2 9 16 23
Tuesday	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	31 3 10 17 24
Wednesday	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25
Thursday	4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27	5 12 19 26
Friday	5 12 19 26	4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28	6 13 20 27
Saturday	6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29	7 14 21 28
Sunday	7 14 21 28	6 13 20 27	5 12 19 26	4 11 18 25	3 10 17 24 31	2 9 16 23 30	1 8 15 22 29

RULE.—To ascertain the day of the week for any given date. Find in the Table of Years, the year sought; opposite the month and in the column in which the year stands, the figure refers to the TABLE on the side, containing the days of the week for each day of that month.

E. G. The Battle of Waterloo was fought on the 18th June, 1815. On what day of the week did that event happen? In the column containing the year 1815, and opposite the month of June, you will find the number 4, and in the TABLE OF DAYS on the side, marked 4, you will see that the 18th was on a Sunday.

CHRONOLOGY.

COMPARATIVE DATES FROM THE CREATION.

Before Christ.	Julian Period.	Olympiad.	Years of Rome.	Years of Nabonassar.	A. D.	Julian Period.	Years of Rome.
4004	710				1	4714	754
2348	2366				51	4764	804
2000	2714				101	4814	854
1000	3714				201	4914	954
776	3938	I.			301	5014	
753	3961	VI. 4	1		401	5114	
747	3967	VIII. 2	7	1	501	5214	
500	4214	LXX. 1	254	249	601	5314	
300	4414	CXX. 1	454	449	622	5335	
100	4614	CLXX. 1	654	649	Era of		
50	4664	CLXXXII. 3	704	699	the		
B. of Christ	4710	CXCIV. 1	750	745	Hejrah.		

A. D.	Lunar Cycle and Dominical Letter.		Solar Cycle.	Indiction.	Chinese Cycle of 60 Years.		Era of Seleucidæ or of Alexander.	
622	15	C.	15	10	LVI.	19	934	F.
700	9	D. C.	17	13	LVII.	37	1012	F.
1000	1	G. F.	13	13	LXII.	37	1312	T.
1100	17	A. G.	18	8	LXIV.	17	1412	M.
1200	5	B. A.	4	3	LXV.	57	1512	S.
1300	21	C. B.	9	13	LXVII.	37	1612	St.
1400	9	D. C.	14	8	LXIX.	17	1712	F.
1500	25	E. D.	19	3	LXX.	57	1812	Th.
1600	13	F. E.	5	13	LXXII.	37	1912	W.
1700	1	G. F.	10	8	LXXIV.	17	2012	T.
1800	17	A. G.	15	3	LXXV.	57	2112	M.
1820	9	D. C.	16	8	LXXVI.	17	2132	F.
1840	1	G. F.	17	13	LXXVI.	37	2152	T.
1850	11	A.	8	8	LXXVI.	47	2162	S.
1900	5	B. A.	1	13	LXXVII.	37	2212	S.
2000	21	C. B.	6	8	LXXIX.	17	2312	F.

A. D.	Era of Hejirah.	Era of Yesdejird.	Sambat, or Era of Vicramáditya.	Sáca, or Era of Sáliváhan.
622	1 Th. 15 July		678	544
700	— 81 W. 14 Feb.	69 S. 30 May	756	622
1000	391 St. 30 Nov.	369 St. 16 Mar.	1056	922
1100	494 M. 5 Nov.	469 M. 20 Feb.	1156	1022
1200	597 W. 11 Oct.	569 W. 26 Jan.	1256	1122
1300	— 700 Th. 15 Sep.	{669 F. 1 Jan. {670 St. 31 Dec.	1356	1222
1400	803 St. 21 Aug.	770 M. 6 Dec.	1456	1322
1500	906 M. 27 July	870 W. 11 Nov.	1556	1422
1600	1009 W. 2 July	970 F. 17 Oct.	1656	1522
1700	—1112 Th. 6 June	1070 S. 22 Sept.	1756	1622
1800	—1215 St. 12 May	1170 T. 28 Aug.	1856	1722
1820	1236 S. 26 Sep.	1190 M. 23 Aug.	1876	1742
1840	—1256 W. 21 Feb.	1210 S. 18 Aug.	1896	1762
1850	—1267 T. 24 Oct.	1220 W. 16 Aug.	1906	1772
1900	1318 M. 17 Apr.	1270 Th. 3 Aug.	1956	1822
2000	1421 Th. 25 Mar.	1370 St. 9 July	2056	1922

The following paper "ON ANNUITIES ON LIVES," which was read at the Meeting of the British Association for the Advancement of Science, in 1857, will explain the construction of the NEW TABLES IV., VI., and VII.

"The tables of the values of Annuities on Lives, as hitherto constructed, only show the rate of Interest which a purchaser may make on the money employed, and replace the *Capital*, provided he can reinvest the surplus income, beyond the interest on the *purchase money*, at the same rate of Interest.

"As it is often important to know the price which should be paid for such annuities, in order that the purchaser may enjoy a certain higher rate of interest on the money invested, while the circumstances of the times only permit a much lower rate to be calculated upon for the future investments, I have constructed the following Formula, which will show the purchase money to be paid for an annuity under such circumstances.

"Let $\mathfrak{A}$ = annuity on the given life.
x = age.
r = interest of £1 for one year, as used in the Table of Annuities, and at which rate the re-investments are to be made.
r' = interest of £1 for one year required by the purchaser, for the use of his money.

"*Formula.* $\dfrac{1}{\dfrac{1}{\mathfrak{A}_x} - r + r'}$ = present worth of annuity on a life aged x, so as to secure a certain higher rate of interest on the Capital employed, while the surplus income is invested at the rate at which the Annuity Table is constructed.

"The same principle applies at various rates of interest, and to annuities for terms of years certain, or annuities for joint lives, or the longest of two lives, &c.

"I beg to annex a Table, with an example, showing the mode of construction.

TABLE OF ANNUITIES, *according to the Carlisle Table of Mortality at* 3 *per cent.; also the price which should be paid for an Annuity, so that the purchaser may obtain* 5 *per cent. Interest on the Money invested, while the re-investments to replace Capital are estimated to be made at only* 3 *per cent.*

Age.	Value of ANNUITY at 3 per Cent. Carlisle.	Value of ANNUITY if 5 per Cent. is to be enjoyed, while the Re-investments are only made at 3 per Cent.
20	21·695	15·130
30	19·557	14·058
40	17·142	12·765
50	14·302	11·121
60	10·491	8·671
70	7·123	6·235
80	4·365	4·014
90	2·499	2·380

"*Example.* At the age of 20, the value of an annuity, Carlisle 3 per Cent. Table, is 21·69528 years' purchase; the log. of which is 1·3363652, and the complement is ·6636348, and the equivalent number is 4·6093, which represents the per centage that every £100 would receive annually. This sum of 4·6093 is composed of £3 for the interest on £100, and £1·6093, which being re-invested annually at 3 per cent. during the life of 20, will replace the £100.

"As we wish to receive £5 per cent. instead of £3 per cent. we must add 2 to the 4·6093, making 6·6093, which is the per centage we ought to get in order that we may enjoy £5 per cent. while the re-investments are made at £3 per cent. We find that the log. of 6·6093 is ·8201555, and the complement is ·1798445—the equivalent number being 15·130, or the value of an annuity at the age of 20, which will afford 5 per cent. to be enjoyed; while the surplus (1·6093), accumulated at 3 per cent., will replace the capital, if the party lives according to the experience of the Carlisle Table of Mortality."

12 *December*, 1854. "CHARLES M. WILLICH."

EXPECTATION OF LIFE.

The approximation to a LAW OF MORTALITY has long been an object of great interest, and I have, therefore, endeavoured by a simple Hypothesis to deduce the approximate Expectation of Life at all ages from 5 to 60.

Let a = the age.

For Selected Lives, the Formula $\frac{2}{3}(81\frac{1}{2} - a)$ = expectation.

The results by this law coincide closely with those obtained by the use of the Carlisle Table of Mortality, from the age of 25 to 60.

For the average Value of Life in England, the Formula $\frac{2}{3}(80 - a)$ = expectation.

This I have found to correspond very nearly with the calculated Expectation, deduced from Dr. Farr's English Life Table.

The following papers on the EXPECTATION OF LIFE, will show the close approximation of the law to the results of the respective Tables.

[*Read at the Meeting of the British Association for the Advancement of Science*, 1857.]

"No law has hitherto been discovered by which a correct table of mortality could be constructed, but attempts have been made by *De Moivre* and others to obtain an approximation.

"If, in conformity with the opinion now generally entertained, and in which I concur, we adopt the Carlisle Table of Mortality, as formed by *Milne* from the observations of *Dr. Heysham*, as a nearer approximation to the actual duration of human life than any other table of mortality hitherto in use, it is remarkable that the following simple hypothesis should enable us to obtain the *expectation of life* almost identical with *Milne's* table for a long series of years up to the age of 60.

"Let a = the age, then $\frac{2}{3}(81\frac{1}{2} - a)$ = expectation.

"We may fairly consider those individuals who attain the age of 60 as selected lives, who may be expected to range within a higher limit than those whom we found existing at the age of 5. Therefore I venture to assume that the respective groups of lives existing at the ages of 5, 60, and 74, fall under different laws.

"The following expressions will give the expectation of life closely approximating to the results as calculated by *Milne*.

From the age of 5 to 60.

$\frac{2}{3}$ of the difference between the age and $81\frac{1}{2}$ = expectation;
or $\frac{2}{3}(81\frac{1}{2} - a)$ = expectation.

From the age of 60 to 74.

$\frac{1}{2}$ of the difference between the age and $88\frac{2}{3}$ = expectation;
or $\frac{1}{2}(88\frac{2}{3} - a)$ = expectation.

From the age of 74 to 90.

$\frac{1}{4}$ of the difference between the age and 103 = expectation;
or $\frac{1}{4}(103 - a)$ = expectation."

"CHARLES M. WILLICH."

13 *June*, 1856.

TABLE showing the EXPECTATION OF LIFE, according to the CARLISLE Table of Mortality, and the HYPOTHESES proposed by CHARLES M. WILLICH.

Age.	By Carlisle Table of Mortality.	By the proposed Hypotheses.	Age.	By Carlisle Table of Mortality.	By the proposed Hypotheses.
	Years. Parts.	Years. Parts.		Years. Parts.	Years. Parts.
5	51·25	51·00	48	22·50	22·33
6	51·17	50·33	49	21·81	21·66
7	50·80	49·66	**50**	21·11	21·00
8	50·24	49·00	51	20·39	20·33
9	49·57	48·33	52	19·68	19·66
10	48·82	47·66	53	18·97	19·00
11	48·04	47·00	54	18·28	18·33
12	47·27	46·33	**55**	17·58	17·66
13	46·51	45·66	56	16·89	17·00
14	45·75	45·00	57	16·21	16·33
15	45·00	44·33	58	15·55	15·66
16	44·27	43·66	59	14·92	15·00
17	43·57	43·00	**60**	14·34	14·33
18	42·87	42·33	61	13·82	13·83
19	42·17	41·66	62	13·31	13·33
20	41·46	41·00	63	12·81	12·83
21	40·75	40·33	64	12·30	12·33
22	40·04	39·66	**65**	11·79	11·83
23	39·31	39·00	66	11·27	11·33
24	38·59	38·33	67	10·75	10·83
25	37·86	37·66	68	10·23	10·33
26	37·14	37·00	69	9·70	9·83
27	36·41	36·33	**70**	9·18	9·33
28	35·69	35·66	71	8·65	8·83
29	35·00	35·00	72	8·16	8·33
30	34·34	34·33	73	7·72	7·83
31	33·68	33·66	74	7·33	7·33
32	33·03	33·00	**75**	7·01	7·00
33	32·36	32·33	76	6·69	6·75
34	31·68	31·66	77	6·40	6·50
35	31·00	31·00	78	6·12	6·25
36	30·32	30·33	79	5·80	6·00
37	29·64	29·66	**80**	5·51	5·75
38	28·96	29·00	81	5·21	5·50
39	28·28	28·33	82	4·93	5·25
40	27·61	27·66	83	4·65	5·00
41	26·97	27·00	84	4·39	4·75
42	26·34	26·33	**85**	4·12	4·50
43	25·71	25·66	86	3·90	4·25
44	25·09	25·00	87	3·71	4·00
45	24·46	24·33	88	3·59	3·75
46	23·82	23·66	89	3·47	3·50
47	23·17	23·00	**90**	3·28	3·25

EXPECTATION OF LIFE.

[*Read before the Institute of Actuaries on 31st January, 1859.*]

"DR. FARR, in the Twelfth Report of the Registrar-General, has given the value of Annuities and the Expectation of Life as deduced from the *Male English Life Table.*

"Observing a very uniform difference between the results thus obtained and those from the *Carlisle* Table of Mortality, it appeared to me probable that a simple Hypothesis might be constructed, which would produce a close approximation to the Expectation of Life between certain ages, but somewhat less favourable than the Hypothesis I proposed in 1857 for the Expectation of Life according to the *Carlisle* Table of Mortality.

"On a further investigation, I have found that between the ages of 5 and 60 the following Hypothesis will give a very close approximation to the Expectation of Life, as calculated by Dr. Farr.

"Let a = the age, then $\frac{2}{3}(80-a)$ = expectation;
or $\frac{2}{3}$ of the difference between the age and 80 = expectation."

"CHARLES M. WILLICH."

20 *January*, 1859.

TABLE showing the EXPECTATION OF LIFE, according to the MALE ENGLISH LIFE TABLE, and the HYPOTHESIS proposed by CHARLES M. WILLICH.

Age.	By English Life Table. Males.	By the proposed Hypothesis.	Age.	By English Life Table. Males.	By the proposed Hypothesis.	Age.	By English Life Table. Males.	By the proposed Hypothesis.
	Years. Parts.	Years. Parts.		Years. Parts.	Years. Parts.		Years. Parts.	Years. Parts.
5	50·21	50·00	25	36·60	36·66	45	23·13	23·33
6	49·89	49·33	26	35·92	36·00	46	22·48	22·66
7	49·39	48·66	27	35·24	35·33	47	21·82	22·00
8	48·81	48·00	28	34·57	34·66	48	21·17	21·33
9	48·16	47·33	29	33·89	34·00	49	20·52	20·66
10	47·47	46·66	30	33·21	33·33	50	19·87	20·00
11	46·73	46·00	31	32·53	32·66	51	19·22	19·33
12	45·95	45·33	32	31·85	32·00	52	18·58	18·66
13	45·17	44·66	33	31·17	31·33	53	17·94	18·00
14	44·38	44·00	34	30·50	30·66	54	17·30	17·33
15	43·62	43·33	35	29·82	30·00	55	16·66	16·66
16	42·84	42·66	36	29·15	29·33	56	16·02	16·00
17	42·08	42·00	37	28·47	28·66	57	15·39	15·33
18	41·35	41·33	38	27·80	28·00	58	14·77	14·66
19	40·67	40·66	39	27·13	27·33	59	14·18	14·00
20	39·99	40·00	40	26·46	26·66	60	13·60	13·33
21	39·31	39·33	41	25·79	26·00			
22	38·63	38·66	42	25·12	25·33			
23	37·96	38·00	43	24·46	24·66			
24	37·28	37·33	44	23·79	24·00			

BANK OF ENGLAND DISCOUNTS.

The following TABLE shows the alterations in BANK DISCOUNTS from 1844 to 1858, with the Amount of BANK NOTES issued, and of BULLION held, at the respective periods:—also the average price of WHEAT in each year, and price of 3 ℔ Cent. Stock on the days of Change.

Price of 3 ℔ Cent. Red.	Price of 3 ℔ Cent. Cons.		Date.	Minimum Rate ℔ Cent.	BULLION.	Bank Notes Issued. Held by the Public.	Bank Notes Issued. In reserve by Bank of England.	Bank Notes Issued. Total.	Average Price of Wheat. s.	d.
					£	£	£	£	s.	d.
	98¾		1844. Aug. 31	4	15,315,000	20,448,000	7,732,000	28,180,000	51	3
	99½		Sept. 7	2½	15,209,000	20,176,000	8,175,000	28,351,000		
	95¼		1845. Nov. 8	3½	13,723,000	21,765,000	5,438,000	27,203,000	50	10
	96½		1846. Aug. 29	3	16,366,000	20,426,000	9,450,000	29,876,000	54	8
	93¾		1847. Jan. 16	3½	13,949,000	20,679,000	6,546,000	27,225,000		
	90¼		23	4	13,443,000	20,599,000	6,167,000	26,766,000		
	85¾		Ap. 10	5	9,867,000	20,403,000	2,833,000	23,236,000		
	86½	Panic Year.	Aug. 7	5½	9,253,000	18,688,000	3,946,000	22,634,000	69	9
	81½		Oct. 25	8	8,313,000	20,318,000	1,547,000	21,865,000		
	84½		Nov. 22	7	10,017,000	19,298,000	4,228,000	23,526,000		
	85½		Dec. 4	6	11,033,000	18,783,000	5,583,000	24,366,000		
85			24	5	12,237,000	17,823,000	7,786,000	25,609,000		
	89½		1848. Jan. 29	4	13,390,000	19,142,000	7,640,000	26,782,000	50	6
	84½		June 17	3½	14,169,000	17,377,000	9,975,000	27,352,000		
	86		Nov. 4	3	13,408,000	18,554,000	8,243,000	26,797,000		
	94½		1849. Nov. 24	2½	16,380,000	17,999,000	11,571,000	29,570,000	44	3
97¼			1850. Dec. 28	3	14,964,000	18,574,000	9,778,000	28,352,000	40	3
			1851.						38	6
97½			1852. Jan. 3	2½	17,558,000	19,285,000	11,707,000	30,992,000	40	9
	99¼		Ap. 24	2	19,588,000	21,599,000	11,500,000	33,099,000		
	100½		1853. Jan. 8	2½	19,768,000	23,361,000	9,809,000	33,170,000		
	99½		22	3	19,405,000	23,474,000	9,444,000	32,918,000		
98½			June 4	3½	18,254,000	23,423,000	8,367,000	31,790,000	53	3
	97½		Sept. 3	4	16,590,000	22,466,000	7,697,000	30,163,000		
	95¼		17	4½	15,862,000	22,422,000	6,977,000	29,399,000		
	93½		Oct. 1	5	15,613,000	22,773,000	6,259,000	29,032,000		
	88	War with Russia.	1854. May 13	5½	12,589,000	21,144,000	4,713,000	25,857,000	72	5
	92¾		Aug. 5	5	13,300,000	20,302,000	6,291,000	26,593,000		
	92½		1855. Ap. 7	4½	15,079,000	19,812,000	8,580,000	28,392,000		
	89½		May 5	4	15,619,000	20,168,000	8,743,000	28,911,000		
92½			June 16	3½	18,061,000	19,536,000	11,814,000	31,350,000	74	8
	90½		Sept. 8	4	14,270,000	20,142,000	7,526,000	27,668,000		
	90¼		15	4½	13,698,000	19,713,000	7,397,000	27,110,000		
	88½		29	5	12,309,000	20,173,000	6,195,000	26,368,000		
	87¼		Oct. 6	5½	12,279,000	20,292,000	5,473,000	25,765,000		
	87¼		20	6 & 7	11,230,000	20,372,000	4,310,000	24,682,000		
	94¾		1856. May 24	6	10,559,000	19,332,000	5,082,000	24,414,000		
	94½		31	5	11,385,000	19,554,000	5,687,000	25,241,000		
95¾			June 28	4½	13,074,000	19,515,000	7,389,000	26,904,000		
	92½		Oct. 4	5	10,784,000	20,926,000	3,776,000	24,702,000	69	2
	91½		11	6 & 7	10,140,000	20,543,000	3,521,000	24,064,000		
	92½		Nov. 15	7	9,684,000	19,929,000	3,607,000	23,536,000		
	94¾		Dec. 6	6½	10,466,000	19,195,000	5,151,000	24,346,000		
93¾			20	6	10,514,000	18,513,000	5,864,000	24,377,000		
	93¼	American Indian Panic. Mutiny.	1857. Ap. 2	6½	9,987,559	19,056,870	4,628,120	23,684,990		
92½			June 18	6	10,909,255	18,772,185	5,924,190	24,696,375		
	91½		July 16	5½	11,592,160	19,962,215	5,451,180	25,413,395		
	89½		Oct. 8	6	10,662,692	19,947,275	4,606,040	24,553,315		
	88		12	7	10,109,943	19,990,110	4,024,400	24,014,510	56	4
	88½		19	8	9,524,478	20,183,245	3,217,185	23,400,430		
	88¾		Nov. 5	9	8,731,553	20,371,970	2,258,275	22,630,245		
	88¾		12	10	7,170,508	20,183,355	957,710	†21,141,065		
93¾			Dec. 24	8	10,753,281	19,257,120	7,426,670	26,683,790		
	94¾		1858. Jan. 7	6	12,643,193	19,499,005	7,088,920	26,587,925		
	94½		14	5	13,347,107	19,671,730	7,540,675	27,212,405		
	95¼		28	4	15,398,724	19,664,710	9,418,630	29,083,340	44	2
	95½		Feb. 4	3½	15,793,696	20,075,065	9,370,100	29,445,165		
	96¼		11	3	16,574,647	19,603,315	10,617,445	30,220,760		
	96¾		Dec. 9	2½	18,921,171	20,038,910	12,731,260	32,770,170		

* On 10 July, 1852, Bullion in Bank £22,232,135.
† [illegible] Millions issued under the authority of Government.

BANK OF ENGLAND DISCOUNTS.—*continued.*

The following TABLE shows the alterations in BANK DISCOUNTS from 1859 to 1867, with the Amount of BANK NOTES issued, and of BULLION held, at the respective periods;—also the average price of WHEAT in each year, and the price of 3 ⅌ Cent. Stock on the days of Change.

Price of 3 ⅌ Cent. Red.	Price of 3 ⅌ Cent. Cons.		Date.	Minimum Rate ⅌ Cent.	BULLION.	Bank Notes Issued. Held by the Public.	Bank Notes Issued. In reserve by Bank of England.	Bank Notes Issued. Total.	Average Price of Wheat. s.	d.
					£	£	£	£	s.	d.
	88		1859. Apr. 28	3½	17,640,342	21,908,625	9,496,645	31,435,270		
	90		May 5	4½	17,205,480	22,255,685	8,790,350	31,046,035		
	93½		June 2	3½	17,764,506	21,092,355	10,478,390	31,570,745	43	9
	94½		9	3	17,957,887	21,134,345	10,607,545	31,741,890		
	95½	Chinese War.	July 14	2½	17,941,791	21,712,530	10,100,525	31,813,055		
	95½		1860. Jan. 10	3	15,884,498	22,053,140	7,589,865	29,643,005		
	94½		31	4	14,942,502	21,906,340	6,846,370	28,752,710		
	94½		Mar. 29	4½	15,271,701	20,990,355	8,062,685	29,053,040		
	94½		Ap. 12	5	14,637,102	23,467,255	4,922,085	28,389,340		
	95½		May 10	4½	15,373,326	21,880,935	7,182,845	29,063,780	53	3
	95½		24	4	15,844,195	21,223,290	8,346,100	29,569,390		
	93½		Nov. 8	4½	13,697,085	21,206,070	6,429,370	27,635,449		
	93½		13	5	13,314,811	20,659,270	6,338,385	26,997,655		
	92½		15	6						
	93½		29	5	13,860,376	19,900,215	7,636,360	27,536,575		
92½			Dec. 31	6						
92½			1861. Jan. 2		12,652,839	20,511,595	5,899,815	26,411,410		
	92		7	7						
	91½		9		12,175,386	20,453,800	5,518,115	25,971,915		
	91½		Feb. 14	8	11,571,332	19,690,160	5,535,845	25,226,005		
	92		Mar. 21	7	12,701,425	18,851,195	7,453,425	26,304,620		
	91½		Ap. 4	6	13,000,130	19,823,970	6,844,490	26,668,460		
	91½		11	5	13,122,432	20,158,340	6,690,360	26,848,700	55	4
	91½		May 16	6	11,719,469	20,042,790	5,978,195	26,020,985		
	90		Aug. 1	5	12,126,708	20,297,940	5,706,760	26,004,700		
	90½		15	4½	12,647,658	20,103,520	6,288,460	26,391,980		
	92½		29	4	13,104,322	19,754,080	7,137,875	26,891,955		
	93½		Sept. 19	3½	13,999,792	19,836,180	7,987,265	27,823,445		
	93½		Nov. 7	3	14,210,774	20,773,315	7,279,960	28,053,275		
	93½		1862. Jan. 9	2½	16,046,017	20,353,615	9,505,300	29,858,915		
	93½		May 22	3	16,344,940	20,880,055	9,217,290	30,097,345		
	92		July 10	2½	17,055,537	21,815,660	9,021,975	30,837,635	55	5
	93½		24	2	18,060,617	22,203,055	9,652,160	31,855,215		
	93½		Oct. 3	3	16,949,137	21,533,060	9,366,245	30,899,305		
	92½		1863. Jan. 15	4	14,102,169	20,286,805	7,601,370	27,888,175		
	92½		28	5	13,611,823	20,101,170	7,286,305	27,387,475		
	92½		Feb. 19	4	14,589,222	19,310,720	8,990,535	28,301,255		
	93		Ap. 23	3½	15,387,161	20,800,305	8,391,525	29,191,830		
	93½		30	3	15,348,492	20,868,465	8,272,940	29,141,405		
	93½		May 16	3½	14,653,141	20,637,610	7,744,315	28,381,925	44	9
	93½		21	4	14,529,451	20,683,110	7,661,395	28,344,505		
	93		Nov. 2	5	13,799,428	22,040,970	5,803,605	27,844,575		
	92½		5	6						
	90½		Dec. 2	7	13,048,475	21,022,625	6,061,765	27,084,390		
	90½		3	8						
	91½		24	7	14,217,067	19,656,815	8,496,345	28,153,160		
	90½		1864. Jan. 20	8	12,974,109	20,827,195	6,128,295	26,955,490		
	90½		Feb. 11	7	13,472,271	20,161,920	7,241,265	27,403,185		
	91½		25	6	13,819,412	19,674,915	8,028,165	27,703,080		
	91½		Ap. 16	7	13,080,400	21,256,220	5,770,725	27,026,945		
	90½		May 2	8	12,567,776	20,956,235	5,520,300	26,476,535		
	90½		5	9	12,454,244	21,484,250	4,944,180	26,428,430	40	2
	91½		9	8	13,267,446	20,819,535	6,431,630	27,251,165		
	91½		26	7	13,713,943	20,416,805	7,274,500	27,691,305		
	90		June 16	6	14,304,205	20,127,850	8,075,985	28,203,835		
	90		July 25	7	12,996,685	21,635,545	5,318,980	26,954,525		
	89½		Aug. 4	8	12,877,433	21,928,940	4,892,785	26,821,725		

BANK OF ENGLAND DISCOUNTS—*continued.*

[illegible] Table shows the [illegible] in Bank Discounts from [illegible] to [illegible], with the amount of Bank Notes issued, and of Bullion held, at the respective periods:—also the average price of Wheat in each year, and the price of 3 ₩ Cent. Stock on the days of Change.

Value of 3 ₩ Cent. Red.	Value of 3 ₩ Cent. Cons.	Date	Rate ₩ Cent.	Bullion.	Bank Notes Issued: Held by the Public.	Bank Notes Issued: In reserve by Bank of England.	Bank Notes Issued: Total.	Average Price of Wheat.
				£	£	£	£	s. d.
	[illegible]	1864. Sept. 8	9	12,970,137	[illegible]	[illegible]	[illegible]	
	[illegible]	Nov. 10	8	13,647,270	[illegible]	[illegible]	[illegible]	40 2
	[illegible]	[illegible]	7	14,331,694	[illegible]	[illegible]	[illegible]	
	[illegible]	Dec. 15	6	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	1865. Jan. 12	[illegible]	14,097,320	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	5	14,937,216	[illegible]	[illegible]	[illegible]	
	[illegible]	Mar. [illegible]	[illegible]	14,401,467	19,939,253	[illegible]	[illegible]	
	[illegible]	[illegible] 27	[illegible]	14,754,105	21,009,035	[illegible]	[illegible]	
	[illegible]	May [illegible]	4½	[illegible]	21,631,400	[illegible]	[illegible]	
	[illegible]	[illegible]	4	[illegible]	20,661,916	6,14[illegible]	[illegible]	
	[illegible]	June 1	3½	[illegible]	20,930,595	8,655,780	29,[illegible],375	
	[illegible]	[illegible]	3	[illegible]	20,720,098	9,010,656	29,[illegible],950	
	[illegible]	July 27	3½	14,103,676	22,071,570	6,161,180	28,[illegible],050	41 10
	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	28,263,905	
	[illegible]	Sept. 2[illegible]	4½	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	Oct. [illegible]	5					
	[illegible]	5	6	13,[illegible]	[illegible],425,100	[illegible],985,125	29,900,595	
	[illegible]	[illegible]	7					
	[illegible]	Nov. 2[illegible]	6	[illegible]	[illegible]	7,209,910	[illegible]	
	[illegible]	Dec. [illegible]	7	14,[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	1866. Jan. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	Feb. [illegible]	7	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	Mar. [illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	May [illegible]	7	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	8					
	[illegible]	[illegible]	[illegible]	[illegible]	2[illegible],316,395	4,050,325	[illegible],206,720	
	[illegible]	[illegible]	[illegible]					
	[illegible]	Aug. [illegible]	[illegible]	[illegible]	[illegible],610,900	[illegible]	[illegible]	49 11
	[illegible]	[illegible]	[illegible]	13,[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	15,[illegible]	[illegible],674,610	[illegible]	[illegible]	
	[illegible]	Sept. [illegible]	[illegible]	[illegible]	[illegible],221,285	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	23,919,683	[illegible]	[illegible]	
	[illegible]	Nov. [illegible]	4	[illegible]	23,56[illegible],310	[illegible]	[illegible]	
	[illegible]	Dec. [illegible]	3½	[illegible]	22,100,465	[illegible]	32,609,645	
	[illegible]	1867. [illegible]	3	[illegible]	[illegible]	[illegible]	33,091,940	
	[illegible]	May [illegible]	2½	[illegible]	[illegible]	[illegible]	34,247,705	64 5
	[illegible]	July [illegible]	2	[illegible]	[illegible]	[illegible]	30,657,395	
	[illegible]	1868. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63 9
	[illegible]	Dec. [illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	1869. Apl. 1	4	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	May 6	4½	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	June 10	4	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	3½	[illegible]	22,650,540	[illegible]	33,412,150	48 2
	[illegible]	July [illegible]	3	[illegible]	23,912,315	[illegible]	33,718,005	
	[illegible]	[illegible]	2½	[illegible]	24,657,436	[illegible]	34,060,755	
	[illegible]	Nov. [illegible]	3	[illegible]	[illegible]	[illegible]	32,660,670	
	[illegible]	1870. July 21	3½	[illegible]	[illegible],264,115	10,251,305	31,516,550	
	[illegible]	[illegible]	4					
	[illegible]	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	Aug. 4	6	[illegible]	[illegible]	[illegible]	32,[illegible]	
	[illegible]	[illegible]	4½	[illegible]	[illegible]	[illegible]	31,290,[illegible]	46 11
	[illegible]	[illegible]	3½	20,[illegible]	[illegible]	[illegible]	33,912,[illegible]	
	[illegible]	[illegible]	3	20,950,616	[illegible]	[illegible]	34,107,375	
	[illegible]	Sept. [illegible]	2½	20,694,700	[illegible]	[illegible]	34,717,905	
	[illegible]	[illegible]	2	21,547,052	[illegible]	[illegible]	35,078,756	
	[illegible]	[illegible]	2½	[illegible]	[illegible]	[illegible]	36,070,835	
	[illegible]	1871. Mar. [illegible]	3					

† [illegible]

BANK OF ENGLAND DISCOUNTS—*continued.*

The following TABLE shows the alterations in BANK DISCOUNTS from 1871 to 1874, with the Amount of BANK NOTES issued, and of BULLION held, at the respective periods:—also the average price of WHEAT in each year, and the price of 3 ℔ Cent. Stock on the days of Change.

Price of 3 ℔ Cent. Red.	Price of 3 ℔ Cent. Cons.	DATE.	Minimum Rate ℔ Cent.	BULLION.	Bank Notes Issued. Held by the Public.	Bank Notes Issued. In Reserve by Bank of England.	Bank Notes Issued. Total.	Average Price of Wheat.
				£	£	£	£	s. d.
	91¾	1871. Mar. 2	3	21,668,717	23,358,350	12,638,290	35,996,640	
	93¼	Ap. 13	2½	22,224,041	24,200,635	12,340,710	36,541,345	
	92¾	June 15	2½	25,924,954	23,716,560	16,418,120	40,042,890	
	93½	July 13	2	26,917,019	25,270,985	15,840,175	41,111,160	
	93	Sept. 21	3	23,497,160	24,786,045	13,058,235	37,844,280	
	92⅞	28	4	21,090,088	25,012,975	10,289,785	35,302,760	56 8
	92⅝	Oct. 7	5	20,214,524	26,294,675	8,373,050	34,667,725	
	93⅛	Nov. 16	4	23,892,103	24,766,185	13,471,750	38,237,935	
	93⅛	30	3½	24,393,584	24,484,250	14,477,230	38,961,480	
	92⅞	Dec. 14	3	24,655,116	24,005,675	14,985,140	38,990,815	
	92½	1872. Ap. 4	3½	22,358,406	26,022,035	10,738,780	36,760,815	
	92⅛	11	4	21,500,304	26,011,470	9,818,805	35,830,275	
	92⅞	May 9	5	20,789,932	25,860,780	9,469,935	35,330,715	
	93⅛	30	4	21,381,811	24,908,940	10,723,115	35,632,055	
	92⅞	June 13	3½	22,827,520	24,864,285	12,241,695	37,105,980	
	92⅞	20	3	23,586,803	24,994,050	12,890,180	37,884,230	
	92¾	July 18	3½	22,663,433	26,165,235	10,980,265	37,145,500	
	92¾	Sept. 18	4	22,137,212	25,785,765	10,653,840	36,439,605	
	92⅝	26	4½	21,712,760	25,690,830	10,347,795	36,038,625	57 0
	92½	Oct. 3	5	21,156,452	27,134,755	8,489,650	35,624,405	
	92⅞	10	6	20,383,704	26,651,960	8,082,500	34,734,460	
	*	Nov. 9	7	19,878,810	25,830,180	8,321,300	34,151,480	
	91⅞	28	6	22,678,443	24,614,945	12,384,570	36,999,515	
	91⅞	Dec. 12	5	23,243,950	24,410,560	13,041,235	37,451,795	
	92⅛	1873. Jan. 9	4½	24,051,412	26,013,720	12,397,640	38,411,360	
	92⅛	23	4	24,698,004	25,141,985	13,731,345	38,873,330	
	92⅞	30	3½	24,982,585	24,857,310	14,182,390	39,039,700	
	92⅞	Mar. 26	4	23,880,372	25,191,320	12,687,850	37,879,120	
	93⅛	May 7	4½	21,665,462	26,387,805	9,412,490	35,800,295	
	93⅛	10	5					
	92⅞	17	6	21,166,552	25,982,880	9,351,485	35,334,370	
	92⅞	June 4	7	20,657,195	25,823,175	9,048,660	34,871,835	
	92⅞	12	6	21,058,628	25,623,065	10,036,690	35,659,755	
	92⅞	July 10	5	22,374,365	26,197,380	10,426,590	36,623,980	
	92¾	17	4½	22,431,260	26,101,560	10,686,635	36,788,195	
	92⅞	24	4	23,216,807	25,868,290	11,609,316	37,477,605	58 8
	92⅞	31	3½	23,312,067	25,888,665	11,722,180	37,610,845	
	92⅞	Aug. 21	3	24,185,320	25,897,675	12,471,425	38,369,100	
	92⅞	Sept. 25	4	23,536,767	25,298,260	12,639,905	37,938,165	
	92⅝	29	5					
	92⅞	Oct. 14	6	21,025,317	26,900,165	8,490,420	35,390,585	
	92⅝	18	7	19,722,801	26,861,765	7,348,050	34,209,815	
	92⅛	Nov. 1	8	19,452,212	25,996,765	7,760,820	33,757,585	
	92⅛	7	9	19,379,683	26,308,395	7,451,905	33,760,300	
	92⅞	20	8	19,975,156	25,273,130	8,859,270	34,132,400	
	92⅞	27	6	21,039,793	24,791,150	10,375,595	35,166,745	
	92⅞	Dec. 4	5	21,667,120	25,218,245	10,733,670	35,951,315	
	93	11	4½	22,285,276	24,822,950	11,722,550	36,545,500	
	92⅛	1874. Jan. 8	4	22,945,721	26,097,425	11,257,905	37,355,330	
	92⅛	15	3½	22,864,168	27,456,570	11,342,300	37,257,060	
	92⅝	Ap. 30	4	21,654,753	26,290,935	9,688,780	35,949,715	
	92⅞	May 28	3½	22,780,394	25,770,795	10,258,185	36,028,980	
	92⅞	June 4	3	22,391,856	26,042,560	10,608,800	36,651,060	
	92⅞	18	2½	23,625,824	25,629,930	11,995,120	37,625,050	
	92⅞	July 30	3	22,478,318	26,705,025	9,995,865	36,700,890	
	92⅞	Aug. 6	4	21,529,929	27,331,865	9,510,490	36,842,355	55 9
	92⅛	20	3½	22,541,378	26,480,785	10,318,060	36,808,845	
	92⅛	27	3	23,078,119	26,332,875	10,933,340	37,266,215	
	92⅞	Oct. 15	4	22,068,556	27,060,430	8,727,665	35,788,095	
	93⅛	Nov. 16	5	20,824,297	26,786,600	8,351,590	35,138,190	
	93¼	30	6	20,124,114	25,835,105	8,483,950	34,319,055	

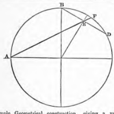
* Holiday.

BANK OF ENGLAND DISCOUNTS—*continued.*

The following TABLE shows the alterations in BANK DISCOUNTS from 1875 to 1876, with the Amount of BANK NOTES issued, and of BULLION held, at the respective periods:—also the average price of WHEAT in each year, and the price of 3 ℘ Cent. Stock on the days of Change.

Price of 3 ℘ Cent.		DATE.			Minimum Rate ℘ Cent.	BULLION.	BANK NOTES ISSUED.			Average Price of WHEAT.	
Red.	Cons.						Held by the Public.	In Reserve by Bank of England.	Total.		
						£	£	£	£	s.	d.
	92⅞	1875.	Jan.	7	5	22,085,311	26,620,775	9,779,225	36,400,000		
	92⅞			14	4	22,233,624	26,289,755	10,268,985	36,558,740		
	92¾			28	3	22,756,124	25,825,615	11,104,810	36,930,425		
	93		Feb.	18	3½	20,862,092	25,663,120	9,360,330	35,023,450		
	91½		July	8	3	26,785,423	28,576,540	12,453,415	41,029,955		
	91⅞			29	2½	28,008,072	28,224,445	14,691,085	42,915,530		
	91⅝		Aug.	12	2	28,895,902	28,480,825	14,704,100	43,184,985		
	94		Oct.	7	2½	26,355,275	28,983,615	11,837,730	40,821,345		
	94			14	3½	25,025,321	29,236,115	10,169,465	39,405,580	45	1
	94½			21	4	24,080,084	28,821,430	9,809,385	38,630,815		
	94¾		Nov.	18	3	23,325,997	27,750,550	9,847,845	37,598,395		
	93⅝		Dec.	30	4	21,703,879	27,525,155	8,478,810	36,003,965		
	93⅞	1876.	Jan.	6	5	21,215,761	28,053,520	7,453,325	35,536,845		
	94⅞			27	4	22,246,347	26,766,585	9,622,130	36,388,715		
	94⅞		Mar.	23	3½	24,664,606	26,177,710	12,541,705	38,719,415		
	94⅝		Ap.	6	3	25,458,385	27,478,700	11,986,400	39,465,100		
	95⅛			20	2	25,848,310	27,456,570	12,586,320	40,042,890		
	94	1877.	May	3	3	25,004,621	29,077,985	10,150,665	39,228,650	60	6
	94½		July	5	2½	26,948,340	28,774,340	12,302,525	41,076,865	61	5
	94½			12	2	27,679,257	28,767,460	12,979,485	41,746,945	63	3
	95½		Aug.	28	3	25,029,219	27,900,545	12,128,674	40,029,219	63	10
	95¾		Oct.	4	4	23,481,193	28,700,025	9,721,173	38,481,198	55	11
	95⅝			11	5	22,788,316	28,357,190	9,431,126	37,788,316	52	2
	97⅛		Nov.	29	4	23,311,547	26,764,365	10,653,865	37,418,230	51	7
	95⅞	1878.	Jan.	10	3	24,508,001	27,605,785	11,148,435	38,754,320	51	8
	95⅞			31	2	24,868,885	26,887,195	11,974,335	38,861,530	51	10
	95		Mar.	28	3	24,032,245	27,116,925	10,807,085	37,922,990	48	11
	97½		May	30	2½	23,451,882	27,113,780	10,201,825	37,315,605	51	2
	95⅜		June	27	3	23,438,504	27,580,375	9,762,310	37,342,685	46	9
	95⅜		July	4	3½	22,603,217	28,521,525	8,002,893	36,524,415	46	1
	94⅞		Aug.	1	4	21,960,442	28,057,015	7,941,999	35,999,005	44	7
	95			12	5	21,780,048	28,177,085	7,614,150	35,791,235	44	10
	94⅞		Oct.	14	6	24,154,755	28,939,795	9,282,905	38,222,000	40	4
	94⅞		Nov.	21	5	26,333,162	29,022,360	11,273,980	40,296,340	41	2
	96	1879.	Jan.	16	4	29,163,368	32,666,210	10,547,935	43,214,145	39	7
	96⅜			30	3	30,005,694	32,155,785	11,795,790	43,951,575	39	1
	96⅞		Mar.	13	2½	33,138,637	28,836,885	17,903,790	46,740,675	39	1
	98		Apl.	10	2	33,490,659	29,828,400	17,361,540	47,190,000	40	11
	98		Nov.	6	3	30,188,508	28,525,740	15,553,105	40,078,845	50	4
	98½	1880.	Jan.	17	2½	27,403,905	26,349,850	16,054,145	42,403,995	44	11
	98⅞		Dec.	9	3	25,012,245	26,029,470	12,872,365	38,901,835	40	10
	98½	1881.	Jan.	13	3½	24,126,989	26,548,695	11,532,195	38,080,890	43	4
	99⅞		Feb.	17	3	27,012,124	25,433,965	15,257,100	40,691,065	42	3
	101⅞		Apl.	28	2½	26,403,253	26,256,115	14,684,515	40,940,630	44	9

ON AN APPROXIMATE GEOMETRICAL QUADRATURE OF THE CIRCLE.



"On a Simple Geometrical construction, giving a very approximate QUADRATURE of the CIRCLE." By C. M. WILLICH. Communicated to the Royal Society by Professor Stokes, Sec. R.S., on 10 May, 1855.

"Let A B be a quadrant of a circle A B C. In the arc B C place a chord B D equal to the radius, so that the arc B D is one of 60°. Bisect B D in E; join A E, and produce the joining line to meet the circumference in F. Then A F differs from the side of a square equal in area to the circle by somewhat more than the one four thousandth part of that side."

The amount of Error, which is about the $\frac{1}{3747}$ part of the side of the Square, may be thus shown.

Let the Radius = 1. Then $x\,y = (1 + \cos 30°)(1 - \cos 30°) = \frac{1}{4}$.

The line A E $= x$.
E F $= y$.
A F $= x + y$.

$$x^2 = 1 + \cos^2 30° + \cos 30° = 1 + \tfrac{3}{4} + \frac{\sqrt{3}}{2} = \frac{7 + 2\sqrt{3}}{4}.$$

$$\therefore\ x = \tfrac{1}{2}\sqrt{7 + 2\sqrt{3}} = 1{\cdot}6174131827 \text{ \&c.}$$

$$y = \frac{1}{4x} = \frac{1}{2\sqrt{7 + 2\sqrt{3}}} = {\cdot}1545678016 \text{ \&c.}$$

$$x + y = \tfrac{1}{2}\left\{\sqrt{7 + 2\sqrt{3}} + \frac{1}{\sqrt{7 + 2\sqrt{3}}}\right\} = \tfrac{1}{2}\,\frac{8 + 2\sqrt{3}}{\sqrt{7 + 2\sqrt{3}}} =$$

$$= \frac{4 + \sqrt{3}}{\sqrt{7 + 2\sqrt{3}}} = 1{\cdot}7719809844 \text{ \&c.}$$

But when the Diameter is 2 the Area is 3·141592653 &c.
and the Square Root is . . . . 1·77245385 &c.
which is the Side of a Square equal to the Area of the Circle.

According to the Diagram the line A F is the side of a Square, by calculation found to be . . . . 1·77198098 &c.

The Difference between the sides of the Squares is . . . ·00047287 &c.

Or the side determined by this simple Geometrical construction differs in defect from the truth by only $\frac{1}{3747}$ of itself.

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ADDITIONS TO INDEX IN NINTH EDITION.

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