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The functions of $E_n(x) = \sum_{k=1}^{\infty} e^{-kx} u^{(n)}(x)$
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DIVISION OF ATOMIC ENERGY

THE FUNCTIONS $E_n(x) = \int_0^\infty e^{-xu} u^{-n} dx$

by

G. Flaczek

Appendix A: by Dr. G. Blanch: An Asymptotic Expansion
for $E_n(x)$.Appendix B: Table of the Functions $E_n(x)$, prepared by the
Mathematical Tables Project, 150 Nassau Street,
New York, N.Y.

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$$\text{THE FUNCTIONS } E_n(x) = \int_1^{\infty} e^{-xu} u^{-n} du$$

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Appendix A, by Dr. G. Blanch: An Asymptotic Expansion
for $E_n(x)$.

Appendix B: Table of the Functions $E_n(x)$, prepared by
the Mathematical Tables Project,
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Summary

The functions $E_n(x)$ occur frequently in diffusion theory. This report gives a collection of formulae and expansions for the functions and their Fourier and Laplace transforms. A new expansion for $E_n(x)$, by Dr. G. Blanch, useful for $x+n \gg 1$, is given in Appendix A. Appendix B contains a table of $E_n(x)$, for integral values of n up to 20, at intervals .01 for $0 \leq x \leq 2$ and .1 for $2 \leq x \leq 10$. The recurrence relations between the functions E_n make interpolation relatively simple.

The functions $E_n(x) = \int_1^\infty e^{-xu} u^{-n} du$ play an important role in diffusion theory. The discussion of certain integral equations can be simplified by their use; expansions in terms of these functions are also often found convenient for the numerical evaluation of integrals occurring in connection with transport problems. The functions have been defined by Schloemilch⁽¹⁾, and have been extensively used by Schwarzschild⁽²⁾, Eddington⁽³⁾, Hopf⁽⁴⁾ and others. In spite of this, no systematic effort for their tabulation seems to have been made so far. A recent attempt, by Mian and Chapman⁽⁵⁾, to approximate the functions by "index sums" is not accurate enough for our purposes.

In the following, we give a few useful formulae for the functions $E_n(x)$ and their Fourier and Laplace transforms. Since most applications deal with positive integral values of n and real x , we restrict ourselves in the following to this case, although most of the relations given have a wider range of validity.

Appendix A, by Dr. G. Blanch, gives a new and very useful asymptotic expansion for $E_n(x)$, which makes tabulation of the functions for large x almost unnecessary. Appendix B contains tables of $E_n(x)$, prepared by the Mathematical Tables Project, for values of n up to 20, at intervals .01 for $0 \leq x \leq 2$ and at intervals .1 for $2 < x \leq 10$.

(1) Zeitschrift fuer Math. und Physik. 4, 390, 1859.

(2) Geott. Nachr. Math. Phys. Klasse 1906, p. 41.
Berliner Berichte Math. Phys. Klasse 1914, p. 1183.

(3) The Internal Constitution of the Stars, Cambridge 1926.

(4) Mathematical Problems of Radiative Equilibrium. Cambridge Tracts No. 31,
1934.

(5) Phil. Mag. 33, p. 115, 1942.

THE FUNCTIONS $E_n(x)$ FOR REAL POSITIVE ARGUMENT AND POSITIVE INTEGRAL n .

1) Definition:

$$E_n(x) = \int_1^{\infty} e^{-xu} u^{-n} du = \int_0^1 \mu^{n-2} e^{-x/\mu} d\mu \quad (1)$$

in particular:

$$E_0(x) = \frac{e^{-x}}{x} \quad (1a)$$

$$E_1(x) = -\text{Ei}(-x) = \int_x^{\infty} e^{-u} \frac{du}{u} \quad (1b)$$

$$E_n(x) = Q_n(x) e^{-x} + \frac{(-x)^{n-1}}{(n-1)!} E_1(x), \quad n \geq 1 \quad (1c)$$

with

$$Q_n(x) = \frac{1}{(n-1)!} \sum_{m=0}^{n-2} (n-m-2)! (-x)^m \quad (1d)$$

2) Recurrence Relations:

$$E_n(x) = \int_x^{\infty} E_{n-1}(x') dx' \quad (2)$$

$$E'_n(x) = -E_{n-1}(x) \quad (3)$$

$$E_n(x) = \frac{1}{n-1} \left\{ e^{-x} - x E_{n-1}(x) \right\}, \quad n \geq 1 \quad (4)$$

3) Expansions:

(a) The following expansion is equivalent to the definition (1):

$$E_n(x) = \sum_{\substack{m=0 \\ m \neq n-1}}^{\infty} \frac{(-x)^m}{(n-1-m) \cdot m!} + (-1)^n \frac{x^{n-1}}{(n-1)!} \left\{ \gamma + \log x - A_n \right\}, \quad n \geq 0$$

$$\gamma = .577216 \quad A_1 = 0, \quad A_n = \sum_{m=1}^{n-1} \frac{1}{m}, \quad n > 1, \quad (5)$$

(b) Asymptotic Expansion ($x \gg 1$):

$$E_n(x) = \frac{e^{-x}}{x} \left\{ 1 - \frac{n}{x} + \frac{n(n+1)}{x^2} - \frac{n(n+1)(n+2)}{x^3} + \dots \right\}, \quad n > 0 \quad (6)$$

4) Fourier Transforms;

(a) Definition and Recurrence Relations.

$$f_n(y) = \int_0^\infty E_n(x) \cos xy \, dx = \frac{1}{y^n} \int_0^y \frac{u^{n-1}}{1+u^2} \, du \quad (7)$$

$$g_n(y) = \int_0^\infty E_n(x) \sin xy \, dx = \frac{1}{y^n} \int_0^y \frac{u^n}{1+u^2} \, du \quad (8)$$

$$f_n(y) = \frac{g_{n-1}(y)}{y} \quad (9)$$

$$f_{n+2} = \frac{1}{y^2} \left\{ \frac{1}{n} - f_n \right\} \quad (10a)$$

$$g_{n+2} = \frac{1}{y} \left\{ \frac{1}{n+1} - \frac{g_n}{y} \right\} \quad (10b)$$

(b) Explicit Expressions;

$$g_{2m}(y) = (-1)^m \frac{\tan^{-1} y}{y^{2m}} + \frac{1}{(2m-1)y} - \frac{1}{(2m-3)y^3} + \frac{1}{(2m-5)y^5} - \dots + \frac{(-1)^{m-1}}{y^{2m-1}} \quad (11a)$$

$$g_{2m+1} = \frac{1}{2} \left\{ \frac{(-1)^m \log(1+y^2)}{y^{2m+1}} + \frac{1}{my} - \frac{1}{(m-1)y^3} + \frac{1}{(m-2)y^5} - \dots + \frac{(-1)^{m-1}}{y^{2m-1}} \right\} \quad (11b)$$

In particular

n	f_n	ξ_n
0	diverges	$\tan^{-1}y$
1	$\frac{\tan^{-1}y}{y}$	$\frac{1}{2y} \log(1+y^2)$
2	$\frac{1}{2y^2} \log(1+y^2)$	$\frac{1}{y} \left\{ 1 - \frac{\tan^{-1}y}{y} \right\}$
3	$\frac{1}{y^2} \left\{ 1 - \frac{\tan^{-1}y}{y} \right\}$	$\frac{1}{2y} \left\{ 1 - \frac{\log(1+y^2)}{y^2} \right\}$
4	$\frac{1}{2y^2} \left\{ 1 - \frac{\log(1+y^2)}{y^2} \right\}$	$\frac{1}{y} \left\{ \frac{1}{3} - \frac{1}{y^2} + \frac{\tan^{-1}y}{y^3} \right\}$

etc.

(c) Expansions

$$f_n(y) = \sum_{m=0}^{\infty} \frac{(-1)^m y^{2m}}{n+2m} \quad (12a)$$

$$\xi_n(y) = \sum_{m=0}^{\infty} \frac{(-1)^m y^{2m+1}}{n+2m+1} \quad (12b)$$

5) Laplace Transforms:

(a) Definition and Recurrence Relation

$$\phi_n(s) = \int_0^{\infty} E_n(x) e^{-sx} dx = \int_0^1 \frac{\mu^{n-1}}{1+s\mu} d\mu \quad (13)$$

$$s\phi_n(s) = \frac{1}{n-1} - \phi_{n-1}(s) \quad (14)$$

(b) Explicit Expressions:

$$\phi_n(s) = \frac{1}{s} \left\{ \frac{1}{n-1} - \frac{1}{(n-2)s} + \frac{1}{(n-3)s^2} - \dots + (-1)^n \frac{(1 - \frac{1}{s} \log(1+s))}{s^{n-2}} \right\}_{n \geq 1} \quad (15)$$

ϕ_0 diverges

$$\phi_1 = \frac{1}{s} \log(1+s) \quad (16)$$

$$\phi_2 = \frac{1}{s} \left\{ 1 - \frac{1}{s} \log(1+s) \right\}$$

etc.

(c) Expansion:

$$\phi_n(s) = \sum_{m=0}^{\infty} \frac{(-s)^m}{n+m} \quad (17)$$

6) Inequalities:

$$E_n(x) \leq \frac{n}{n-1} E_{n+1}(x), \quad n \geq 1 \quad (18)$$

$$\frac{e^{-x}}{x+n} < E_n(x) \leq \frac{e^{-x}}{x+n-1}, \quad n \geq 1 \quad (19)$$

$$E_n^2(x) < E_{n-1}(x) E_{n+1}(x) \quad (20)$$

$$\frac{d}{dx} \left(\frac{E_{n+1}(x)}{E_n(x)} \right) > 0 \quad (21)$$

$$\frac{d}{dx} \frac{E_n(x-a)}{E_n(x)} < 0, \quad 0 < a < x \quad (22)$$

7) Proofs and Remarks.

The recurrence relations (2) and (3) follow immediately from the definition (1). Integrating (3) by parts one obtains (4). Repeated application of (4) yields (1c) and (1d). The expansion (5) follows from the well known expansion for E_1 by integrating it $n-1$ times and using (2) in the form

$$E_n(x) = \frac{1}{n-1} - \int_0^x E_{n-1}(x') dx', \quad n > 1 \quad (2a)$$

(2a) follows from (2) by noting that, according to (4), we have, for $n > 1$

$$\int_0^\infty E_{n-1}(x') dx' = E_n(0) = \frac{1}{n-1} \quad (4a)$$

Similarly (6) follows from the well known asymptotic expansion for E_1 by repeated application of (4).

The expressions for the Fourier and Laplace transforms can be obtained by straightforward integration. The recurrence relations (9), (10) and (14) can also be immediately deduced by translating (2), (3) into Fourier space. It may also be noted that the expansions (17) or (12) give directly the moments of E_n :

$$\int_0^\infty x^m E_n(x) dx = \frac{m!}{n+m}, \quad m \geq 0 \quad \text{for } n > 0; \quad m \geq 1 \quad \text{for } n = 0 \quad (23)$$

The inequalities (18) - (22) have been derived by Hopf⁽⁴⁾.

An extensive discussion of various integrals containing E_1 has been given by Nielsen⁽⁶⁾. In many cases, the corresponding results for E_n can be deduced with the help of the recurrence relations.

(6) Theorie des Integrallogarithmus, Leipzig, 1906.

APPENDIX A.

An Asymptotic Expansion for $E_n(x) = \int_1^{\infty} (e^{-xu}/u^n) du.$

by G. Blanch, Mathematical Tables Project.

We may write

$$E_n(x) = \int_1^{\infty} e^{-(xu+n \log u)} du = \int_1^{\infty} e^{-G} du, \quad (A1)$$

where

$$G = xu + n \log u, \text{ and } \frac{dG}{du} = (xu + n)/u.$$

Integrating by parts,

$$E_n(x) = - \left[e^{-G} u / (xu+n) \right]_1^{\infty} + \int_1^{\infty} n \left\{ e^{-G} / (xu+n)^2 \right\} du \quad (A2)$$

Repeating the process three times, and substituting limits of integration, we have

$$E_n(x) = \frac{e^{-x}}{x+n} \left[1 + \frac{n}{(x+n)^2} + \frac{n(n-2x)}{(x+n)^4} + \frac{n(6x^2-8nx+n^2)}{(x+n)^6} \right] + R(n,x) \quad (A3)$$

where

$$R(x,n) = n \int_1^{\infty} \frac{e^{-xu} (-24 x^3 u^3 + 58n x^2 u^2 - 22n^2 x u + n^3)}{u^n (xu + n)^8} du$$

APPENDIX B.Table of the Functions $E_n(x)$.

Prepared by the Mathematical Tables Project.

The table gives the values of $E_n(x)$ for $n=0,1,2,\dots,20$ at intervals .01 for $x \leq 2$ and at intervals .1 for $2 < x \leq 10$.

INTERPOLATION:

In addition, values of $E_2(x) - x \log_e x$ and $E_3(x) + \frac{1}{2} x^2 \log_e x$ are tabulated for $x \leq 0.1$.

In the region where x is larger than 2, the figures in parentheses denote the power of ten by which entries alongside and below in the same column should be multiplied. For example: Corresponding to $x = 3.5$, $E_{10}(x) = 0.00236120$.

It should be noted that interpolation is made particularly simple by the fact that the derivatives of E_n are given by the functions E_n of lower order. For from (3),

$$\frac{d}{dx^r} E_n(x) = (-1)^r E_{n-r}(x)$$

Thus by Taylor's expansion

$$E_n(x+t) = E_n(x) + t E_{n-1}(x) + \frac{t^2}{2} E_{n-2}(x) + \frac{t^3}{6} E_{n-3}(x) + \dots$$

For $n \geq 4$, it is enough to stop with E_{n-3} , provided t is allowed to take on negative as well as positive values and x is so chosen that $|t|$ is no greater than $0.5h$, where h is the interval in the argument. For $x < 2$, one may drop the term involving $E_{n-3}(x)$.

For $n=3$ or 2 and $x < .10$, it is necessary to interpolate in the auxiliary functions $E_3(x) + \frac{1}{2} x^2 \log_e x$, or in $E_2(x) - x \log_e x$; linear interpolation in these auxiliary functions will be correct to within a unit in the fifth decimal place; 3-point interpolation will yield 7 decimal places. For $x > .10$ and $n=3$, formula (4) may be used.

If $n = 2$ and x is close to 0.10, linear interpolation will be in error by about a unit in the fourth decimal place; 3-point interpolation will be correct to five decimals, and 5-point interpolation will yield seven places. Interpolation becomes progressively easier as x increases; thus near $x = 0.5$, linear interpolation is correct to within 2×10^{-5} , and 3-point interpolation is correct to within 3×10^{-7} . When the interval in x is 0.1 (for x greater than 2), linear interpolation in $E_2(x)$ yields 3 significant figures, and four-point interpolation is correct to within 3 units in the sixth significant figure.

Since $E_1(x)$ is tabulated more extensively elsewhere, interpolation for $E_1(x)$ in this table need not be considered. Similarly $E_0(x)$ may be very simply computed directly with the aid of a table of e^{-x} , e.g. Tables of the Exponential Function, Federal Work Agency, Work Projects Administration for the City of New York.

NC
Chalk River, Ontario.
July 15, 1946.

x	$E_0(x)$	$E_1(x)$	$E_2(x)$	$E_3(x)$	$E_4(x)$
.00	∞	∞	1.0000000	.5000000	.3333333
.01	99.0049834	4.0379296	0.9496705	.4902766	.3283824
.02	49.0099337	3.3547078	.9131045	.4809683	.3235264
.03	32.3481844	2.959 187	.8816720	.4719977	.3187619
.04	24.0197360	2.6812637	.8535389	.4633239	.3140855
.05	19.0245885	2.4678985	.8278345	.4549188	.3094945
.06	15.6960756	2.2953069	.8040461	.4467609	.3049863
.07	13.3 99 17	2.1508382	.7818352	.4388327	.3005585
.08	11.5389543	2.0269410	.7609611	.4311197	.2962089
.09	10.1547909	1.9187448	.7412442	.4236096	.2919354
.10	9.0483742	1.8229240	.7225450	.4162915	.2877361
.11	8.1439467	1.7371067	.7047524	.409 557	.2836090
.12	7.3910036	1.6595418	.6877754	.4021937	.2795524
.13	6.7545802	1.5888993	.6715385	.3953977	.2755646
.14	6.2097017	1.5241457	.6559778	.3887607	.2716439
.15	5.7380532	1.4644617	.6410387	.3822761	.2677889
.16	5.3258987	1.409 867	.6266739	.3759380	.2639979
.17	4.9627342	1.3577806	.6128421	.3697408	.2602696
.18	4.6403901	1.3 97961	.5995069	.3636795	.2566026
.19	4.3524165	1.2648584	.5866360	.3577491	.2529956
.20	4.0936538	1.222 505	.5742006	.3519453	.2494472
.21	3.8599250	1.1829020	.5621748	.3462638	.2459563
.22	3.6478127	1.1453801	.5505352	.3407005	.2425216
.23	3.4544939	1.1098831	.5392605	.3352518	.2391419
.24	3.2776161	1.0762354	.5283314	.3299142	.2358162
.25	3.1152031	1.0442826	.5177301	.3246841	.2325432
.26	2.9655830	1.0138887	.5074405	.3195585	.2293221
.27	2.8273315	0.9849331	.4974476	.3145343	.2261517
.28	2.6992276	.9573083	.4877374	.3096086	.2230311
.29	2.5802192	.9309182	.4782973	.3047787	.2199593
.30	2.4693941	.9056767	.4691152	.3000418	.2169352
.31	2.3659579	.8815057	.4601802	.2953956	.2139581
.32	2.2692157	.8583352	.4514818	.2908374	.2110270
.33	2.1785568	.8361012	.4430104	.2863652	.2081411
.34	2.0934421	.8147456	.4347568	.2819765	.2052994
.35	2.0133945	.7942154	.4267127	.2776693	.2025013
.36	1.9379898	.7744622	.4188699	.2734416	.1997458
.37	1.8668495	.7554414	.4112210	.2692913	.1970322
.38	1.7996353	.7371121	.4037588	.2652165	.1943597
.39	1.7360433	.7194367	.3964766	.2612155	.1917276

x	E ₅	E ₆	E ₇	E ₈	E ₉
.00	.2500000	.2000000	.1666667	.1428571	.1250000
.01	.2466915	.1975166	.1646791	.1412004	.1235797
.02	.2434320	.1950660	.1627162	.1395635	.1221759
.03	.2402207	.1926478	.1607777	.1379460	.1207884
.04	.2370565	.1902614	.1588632	.1363478	.1194169
.05	.2339387	.1879065	.1569724	.1347687	.1180614
.06	.2308663	.1855825	.1551049	.1332083	.1167215
.07	.2278387	.1832890	.1532606	.1316665	.1153972
.08	.2248549	.1810256	.1514391	.1301430	.1140881
.09	.2219142	.1787918	.1496400	.1286377	.1127942
.10	.2190160	.1765872	.1478631	.1271502	.1115153
.11	.2161593	.1744113	.1461081	.1256803	.1102512
.12	.2133435	.1722638	.1443748	.1242279	.1090016
.13	.2105680	.1701443	.1426628	.1227928	.1077666
.14	.2078320	.1680524	.1409718	.1213746	.1065457
.15	.2051349	.1659875	.1393016	.1199732	.1053390
.16	.2024760	.1639495	.1376520	.1185885	.1041462
.17	.1998548	.1619379	.1360226	.1172201	.1029672
.18	.1972704	.1599523	.1344131	.1158680	.1018018
.19	.1947225	.1579924	.1328234	.1145318	.1006498
.20	.1922103	.1560577	.1312532	.1132114	.0995111
.21	.1897334	.1541481	.1297022	.1119067	.0983855
.22	.1872910	.1522630	.1281702	.1106173	.0972729
.23	.1848827	.1504021	.1266568	.1093432	.0961731
.24	.1825080	.1485652	.1251620	.1080841	.0950860
.25	.1801662	.1467518	.1236855	.1068399	.0940114
.26	.1778570	.1449618	.1222269	.1056104	.0929491
.27	.1755796	.1431946	.1207862	.1043953	.0918991
.28	.1733338	.1414501	.1193630	.1031946	.0908612
.29	.1711188	.1397278	.1179571	.1020080	.0898352
.30	.1689344	.1380276	.1165683	.1008354	.0888210
.31	.1667800	.1363490	.1151965	.0996766	.0878184
.32	.1646551	.1346919	.1138413	.0985314	.0868274
.33	.1625593	.1330558	.1125026	.0973997	.0858477
.34	.1604921	.1314406	.1111801	.0962813	.0848793
.35	.1584532	.1298459	.1098737	.0951760	.0839221
.36	.1564420	.1282714	.1085831	.0940838	.0829758
.37	.1544581	.1267170	.1073082	.0930043	.0820403
.38	.1525012	.1251822	.1060487	.0919376	.0811156
.39	.1505708	.1236669	.1048045	.0908833	.0802016

x	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄
.00	.1111111	.1000000	.0909091	.0833333	.0769231
.01	.1098682	.0988951	.0899146	.0824292	.0760943
.02	.1086395	.0978026	.0889311	.0815350	.0752745
.03	.1074246	.0967223	.0879585	.0806506	.0744635
.04	.1062236	.0956540	.0869967	.0797758	.0736614
.05	.1050363	.0945978	.0860454	.0789106	.0728680
.06	.1038624	.0935533	.0851047	.0780549	.0720832
.07	.1027018	.0925205	.0841743	.0772085	.0713069
.08	.1015544	.0914992	.0832542	.0763713	.0705390
.09	.1004200	.0904893	.0823443	.1755434	.0697794
.10	.0992984	.0894908	.0814444	.0747244	.0690281
.11	.0981896	.0885033	.0805544	.0739144	.0682849
.12	.0970934	.0875269	.0796743	.0731133	.0675498
.13	.0960095	.0865614	.0788039	.0723209	.0668226
.14	.0949380	.0856067	.0779430	.0715372	.0661033
.15	.0938786	.0846626	.0770917	.0707620	.0653918
.16	.0928312	.0837291	.0762497	.0699953	.0646880
.17	.0917956	.0828060	.0754171	.0692370	.0639919
.18	.0907718	.0818931	.0745936	.0684869	.0633033
.19	.0897595	.0809905	.0737792	.0677451	.0626221
.20	.0887587	.0800979	.0729737	.0670113	.0619483
.21	.0877693	.0792153	.0721772	.0662856	.0612819
.22	.0867910	.0783425	.0713894	.0655678	.0606226
.23	.0858238	.0774794	.0706103	.0648578	.0599705
.24	.0848675	.0766260	.0698398	.0641555	.0593254
.25	.0839220	.0757820	.0690778	.0634609	.0586874
.26	.0829872	.0749475	.0683241	.0627739	.0580562
.27	.0820630	.0741222	.0675788	.0620944	.0574318
.28	.0811492	.0733062	.0668416	.0614223	.0568143
.29	.0802457	.0724992	.0661126	.0607576	.0562034
.30	.0793524	.0717012	.0653916	.0601001	.0555991
.31	.0784693	.0709121	.0646786	.0594497	.0550013
.32	.0775960	.0701318	.0639734	.0588065	.0544101
.33	.0767327	.0693602	.0632759	.0581702	.0538252
.34	.0758790	.0685971	.0625861	.0575409	.0532466
.35	.0750350	.0678426	.0619039	.0569185	.0526744
.36	.0742006	.0670964	.0612292	.0563028	.0521083
.37	.0733755	.0663585	.0605620	.0556939	.0515483
.38	.0725597	.0656289	.0599020	.0550916	.0509944
.39	.0717531	.0649073	.0592494	.0544958	.0504464

x	E ₁₅	E ₁₆	E ₁₇	E ₁₈	E ₁₉	E ₂₀
.00	.0714286	.0666667	.0625000	.0588235	.0555556	.0526316
.01	.0706635	.0659562	.0618369	.0582019	.0549704	.0520790
.02	.0699067	.0652534	.0611808	.0575868	.0543915	.0515321
.03	.0691580	.0645581	.0605318	.0569782	.0538187	.0509911
.04	.0684174	.0638702	.0598897	.0563761	.0532519	.0504558
.05	.0676847	.0631897	.0592544	.0557804	.0526911	.0499260
.06	.0669600	.0625165	.0586258	.0551910	.0521363	.0494019
.07	.0662430	.0618504	.0580040	.0546079	.0515873	.0488833
.08	.0655338	.0611916	.0573888	.0540309	.0510441	.0483702
.09	.0648322	.0605398	.0567802	.0534601	.0505067	.0478624
.10	.0641382	.0598949	.0561780	.0528953	.0499749	.0473600
.11	.0634516	.0592570	.0555822	.0523365	.0494487	.0468629
.12	.0627725	.0586258	.0549928	.0517836	.0489281	.0463710
.13	.0621006	.0580015	.0544097	.0512366	.0484130	.0458843
.14	.0614360	.0573838	.0538328	.0506954	.0479034	.0454027
.15	.0607785	.0567727	.0532620	.0501599	.0473991	.0449262
.16	.0601281	.0561682	.0526973	.0496301	.0469002	.0444547
.17	.0594847	.0555702	.0521386	.0491060	.0464065	.0439882
.18	.0588483	.0549785	.0515859	.0485873	.0459180	.0435266
.19	.0582186	.0543932	.0510390	.0480742	.0454347	.0430698
.20	.0575958	.0538141	.0504980	.0475665	.0449565	.0426179
.21	.0569796	.0532412	.0499627	.0470642	.0444834	.0421707
.22	.0563701	.0526745	.0494332	.0465673	.0440152	.0417282
.23	.0557672	.0521138	.0489092	.0460756	.0435520	.0412903
.24	.0551707	.0515591	.0483909	.0455891	.0430937	.0408571
.25	.0545806	.0510104	.0478780	.0451077	.0426402	.0404285
.26	.0539969	.0504675	.0473706	.0446315	.0421915	.0400043
.27	.0534195	.0499304	.0468686	.0441603	.0417476	.0395846
.28	.0528483	.0493991	.0463720	.0436941	.0413083	.0391693
.29	.0522832	.0488734	.0458806	.0432328	.0408737	.0387584
.30	.0517242	.0483534	.0453945	.0427765	.0404436	.0383518
.31	.0511712	.0478389	.0449136	.0423249	.0400181	.0379495
.32	.0506241	.0473300	.0444377	.0418782	.0395971	.0375515
.33	.0500830	.0468264	.0439669	.0414362	.0391805	.0371576
.34	.0495476	.0463283	.0435012	.0409988	.0387684	.0367678
.35	.0490180	.0458355	.0430404	.0405661	.0383606	.0363822
.36	.0484941	.0453479	.0425844	.0401380	.0379570	.0360006
.37	.0479758	.0448656	.0421334	.0397144	.0375578	.0356231
.38	.0474631	.0443884	.0416871	.0392953	.0371627	.0352495
.39	.0469559	.0439163	.0412456	.0388807	.0367719	.0348798

x	E ₀	E ₁	E ₂	E ₃	E ₄
.40	1.6758001	.7023801	.3893680	.2572864	.1891352
.41	1.6186591	.6859103	.3824270	.2534276	.1865816
.42	1.5643972	.6699973	.3756479	.2496373	.1840664
.43	1.5128118	.6546134	.3690253	.2459141	.1815887
.44	1.4637191	.6397328	.3625540	.2422563	.1791479
.45	1.4169514	.6253313	.3562291	.2386625	.1767433
.46	1.3723558	.6113865	.3500458	.2351313	.1743744
.47	1.3297921	.5978774	.3439999	.2316612	.1720405
.48	1.2891321	.5847843	.3380869	.2282508	.1697410
.49	1.2502579	.5720888	.3323029	.2248990	.1674753
.50	1.2130613	.5597736	.3266439	.2216044	.1652428
.51	1.1774423	.5478224	.3211062	.2183657	.1630430
.52	1.1433087	.5362198	.3156863	.2151818	.1608753
.53	1.1105754	.5249515	.3103807	.2120516	.1587392
.54	1.0791634	.5140039	.3051862	.2089739	.1566341
.55	1.0489997	.5033641	.3000996	.2059475	.1545596
.56	1.0200162	.4930200	.2951179	.2029715	.1525150
.57	0.9921499	.4829600	.2902382	.2000448	.1505000
.58	0.9653420	.4731734	.2854578	.1971664	.1485139
.59	0.9395378	.4636498	.2807739	.1943353	.1465565
.60	0.9146861	.4543795	.2761839	.1915506	.1446271
.61	0.8907391	.4453531	.2716855	.1888114	.1427253
.62	0.8676523	.4365619	.2672761	.1861166	.1408507
.63	0.8453838	.4279973	.2629535	.1834656	.1390028
.64	0.8238944	.4196516	.2587154	.1808573	.1371813
.65	0.8031473	.4115170	.2545597	.1782910	.1353855
.66	0.7831081	.4035863	.2504844	.1757658	.1336153
.67	0.7637441	.3958526	.2464874	.1732810	.1318701
.68	0.7450250	.3883092	.2425667	.1708358	.1301495
.69	0.7269218	.3809500	.2387206	.1684294	.1284533
.70	0.7094076	.3737688	.2349471	.1660612	.1267808
.71	0.6924566	.3667600	.2312446	.1637303	.1251319
.72	0.6760448	.3599179	.2276114	.1614360	.1235061
.73	0.6601493	.3532374	.2240457	.1591778	.1219031
.74	0.6447485	.3467133	.2205461	.1569549	.1203224
.75	0.6298221	.3403408	.2171109	.1547667	.1187638
.76	0.6153506	.3341153	.2137388	.1526125	.1172270
.77	0.6013157	.3280323	.2104282	.1504917	.1157115
.78	0.5877000	.3220876	.2071777	.1484037	.1142170
.79	0.5744871	.3162770	.2039860	.1463479	.1127433

x	E ₅	E ₆	E ₇	E ₈	E ₉
.40	.1486665	.1221707	.1035753	.0898414	.0792979
.41	.1467879	.1206934	.1023610	.0888117	.0784047
.42	.1449347	.1192348	.1011614	.0877941	.0775217
.43	.1431065	.1177947	.0999762	.0867685	.0766488
.44	.1413028	.1163726	.0988054	.0857946	.0757859
.45	.1395234	.1149685	.0976487	.0848123	.0749328
.46	.1377679	.1135821	.0965060	.0838416	.0740896
.47	.1360358	.1122131	.0953770	.0828822	.0732560
.48	.1343269	.1108613	.0942617	.0819340	.0724319
.49	.1326409	.1095265	.0931597	.0809969	.0716172
.50	.1309773	.1082084	.0920711	.0800707	.0708119
.51	.1293359	.1069069	.0909955	.0791554	.0700158
.52	.1277163	.1056216	.0899329	.0782508	.0692288
.53	.1261183	.1043525	.0888830	.0773567	.0684507
.54	.1245415	.1030992	.0878458	.0764731	.0676816
.55	.1229855	.1018616	.0868210	.0755998	.0669212
.56	.1214502	.1006394	.0858085	.0747366	.0661696
.57	.1199351	.0994325	.0848082	.0738835	.0654265
.58	.1184401	.0982406	.0838198	.0730404	.0646919
.59	.1169647	.0970636	.0828433	.0722071	.0639656
.60	.1155088	.0959013	.0818785	.0713835	.0632477
.61	.1140721	.0947534	.0809252	.0705695	.0625379
.62	.1126543	.0936198	.0799834	.0697650	.0618363
.63	.1112550	.0925002	.0790528	.0689698	.0611426
.64	.1098741	.0913946	.0781333	.0681839	.0604568
.65	.1085113	.0903027	.0772248	.0674071	.0597789
.66	.1071663	.0892243	.0763272	.0666393	.0591087
.67	.1058389	.0881593	.0754403	.0658805	.0584461
.68	.1045288	.0871075	.0745640	.0651305	.0577910
.69	.1032358	.0860687	.0736981	.0643892	.0571434
.70	.1019597	.0850427	.0728426	.0636565	.0565032
.71	.1007001	.0840294	.0719972	.0629323	.0558703
.72	.0994570	.0830286	.0711619	.0622165	.0552445
.73	.0982299	.0820402	.0703366	.0615090	.0546259
.74	.0970188	.0810640	.0695211	.0608098	.0540143
.75	.0958234	.0800998	.0687153	.0601186	.0534097
.76	.0946435	.0791475	.0679191	.0594354	.0528119
.77	.0934788	.0782069	.0671323	.0587602	.0522211
.78	.0923292	.0772779	.0663549	.0580927	.0516367
.79	.0911944	.0763602	.0655867	.0574330	.0510591

x	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄
.40	.0709557	.0641938	.0586039	.0539065	.0499044
.41	.0701671	.0634882	.0579655	.0533237	.0493683
.42	.0693875	.0627904	.0573341	.0527472	.0488379
.43	.0686167	.0621004	.0567096	.0521770	.0483133
.44	.0678545	.0614180	.0560920	.0516130	.0477944
.45	.0671009	.0607433	.0554812	.0510651	.0472810
.46	.0663558	.0600760	.0548772	.0505033	.0467732
.47	.0656191	.0594161	.0542797	.0499576	.0462709
.48	.0648907	.0587636	.0536888	.0494177	.0457741
.49	.0641704	.0581183	.0531044	.0488838	.0452826
.50	.0634583	.0574802	.0525264	.0483556	.0447964
.51	.0627542	.0568491	.0519548	.0478332	.0443154
.52	.0620580	.0562250	.0513894	.0473165	.0438397
.53	.0613696	.0556079	.0508303	.0468054	.0433691
.54	.0606889	.0549976	.0502772	.0462999	.0429036
.55	.0600159	.0543941	.0497303	.0457998	.0424431
.56	.0593505	.0537973	.0491893	.0453052	.0419875
.57	.0586925	.0532071	.0486543	.0448160	.0415369
.58	.0580419	.0526234	.0481252	.0443321	.0410912
.59	.0573986	.0520462	.0476018	.0438535	.0406503
.60	.0567626	.0514754	.0470842	.0433801	.0402141
.61	.0561336	.0509109	.0465723	.0429118	.0397827
.62	.0555118	.0503527	.0460660	.0424486	.0393559
.63	.0548969	.0498007	.0455652	.0419905	.0389337
.64	.0542889	.0492548	.0450699	.0415373	.0385160
.65	.0536877	.0487149	.0445801	.0410891	.0381029
.66	.0530933	.0481810	.0440956	.0406457	.0376942
.67	.0525055	.0476530	.0436165	.0402071	.0372900
.68	.0519243	.0471308	.0431425	.0397733	.0368901
.69	.0513497	.0466145	.0426738	.0393443	.0364945
.70	.0507815	.0461038	.0422102	.0389198	.0361032
.71	.0502196	.0455988	.0417517	.0385000	.0357161
.72	.0496640	.0450994	.0412982	.0380848	.0353332
.73	.0491147	.0446055	.0408497	.0376741	.0349544
.74	.0485715	.0441171	.0404061	.0372678	.0345797
.75	.0480344	.0436341	.0399674	.0368659	.0342090
.76	.0475033	.0431564	.0395334	.0364684	.0338423
.77	.0469781	.0426840	.0391042	.0360752	.0334796
.78	.0464588	.0422168	.0386797	.0356863	.0331208
.79	.0459453	.0417548	.0382599	.0353016	.0327659

x	E ₁₅	E ₁₆	E ₁₇	E ₁₈	E ₁₉	E ₂₀
.40	.0461542	.0434492	.0408088	.0384704	.0363851	.0345140
.41	.0459578	.0429872	.0403766	.0380645	.0360024	.0341521
.42	.0454668	.0425301	.0399490	.0376628	.0356239	.0337939
.43	.0449810	.0420778	.0395260	.0372655	.0352492	.0334396
.44	.0445006	.0416304	.0391074	.0368723	.0348785	.0330889
.45	.0440251	.0411878	.0386934	.0364833	.0345117	.0327420
.46	.0435549	.0407499	.0382837	.0360984	.0341488	.0323987
.47	.0430896	.0403167	.0378783	.0357176	.0337897	.0320590
.48	.0426294	.0398881	.0374773	.0353408	.0334344	.0317229
.49	.0421741	.0394641	.0370806	.0349681	.0330829	.0313903
.50	.0417237	.0390446	.0366880	.0345992	.0327351	.0310612
.51	.0412782	.0386296	.0362997	.0342343	.0323909	.0307356
.52	.0408374	.0382190	.0359154	.0338732	.0320504	.0304134
.53	.0404014	.0378128	.0355353	.0335150	.0317134	.0300946
.54	.0399700	.0374110	.0351591	.0331626	.0313800	.0297791
.55	.0395433	.0370134	.0347870	.0328128	.0310502	.0294670
.56	.0391211	.0366201	.0344189	.0324667	.0307238	.0291581
.57	.0387035	.0362310	.0340546	.0321244	.0304008	.0288525
.58	.0382904	.0358460	.0336942	.0317856	.0300813	.0285501
.59	.0378817	.0354651	.0333377	.0314505	.0297651	.0282508
.60	.0374774	.0350883	.0329849	.0311189	.0294522	.0279548
.61	.0370774	.0347156	.0326359	.0307908	.0291427	.0276618
.62	.0366817	.0343468	.0322906	.0304661	.0288364	.0273719
.63	.0362903	.0339819	.0319489	.0301449	.0285334	.0270850
.64	.0359030	.0336210	.0316109	.0298271	.0282335	.0268012
.65	.0355199	.0332639	.0312765	.0295127	.0279368	.0265204
.66	.0351409	.0329106	.0309456	.0292016	.0276432	.0262425
.67	.0347660	.0325610	.0306183	.0288938	.0273528	.0259675
.68	.0343951	.0322152	.0302944	.0285892	.0270654	.0256954
.69	.0340282	.0318731	.0299740	.0282879	.0267810	.0254262
.70	.0336652	.0315346	.0296569	.0279897	.0264996	.0251598
.71	.0333061	.0311998	.0293433	.0276947	.0262212	.0248962
.72	.0329509	.0308685	.0290329	.0274029	.0259457	.0246353
.73	.0325994	.0305408	.0287259	.0271141	.0256731	.0243772
.74	.0322518	.0302165	.0284221	.0268283	.0254034	.0241219
.75	.0319078	.0298957	.0281215	.0265456	.0251365	.0238692
.76	.0315676	.0295783	.0278242	.0262659	.0248725	.0236191
.77	.0312310	.0292643	.0275300	.0259891	.0246112	.0233717
.78	.0308980	.0289537	.0272389	.0257153	.0243527	.0231269
.79	.0305686	.0286464	.0269509	.0254443	.0240969	.0228846

x	E_0	E_1	E_2	E_3	E_4
.80	0.5616612	.3105966	.2008517	.1443238	.1112900
.81	0.5492075	.3050425	.1977736	.1423307	.1098567
.82	0.5371118	.2996112	.1947504	.1403681	.1084433
.83	0.5253606	.2942992	.1917810	.1384355	.1070493
.84	0.5139411	.2891029	.1888641	.1365324	.1056744
.85	0.5028411	.2840193	.1859986	.1346581	.1043185
.86	0.4920489	.2790451	.1831833	.1328122	.1029812
.87	0.4815535	.2741773	.1804173	.1309943	.1016622
.88	0.4713442	.2694130	.1776994	.1292037	.1003612
.89	0.4614110	.2647495	.1750287	.1274401	.0990780
.90	0.4517441	.2601839	.1724041	.1257030	.0978123
.91	0.4423343	.2557138	.1698247	.1239919	.0965639
.92	0.4331729	.2513364	.1672895	.1223063	.0953324
.93	0.4242513	.2470495	.1647977	.1206459	.0941177
.94	0.4155615	.2428506	.1623482	.1190102	.0929194
.95	0.4070958	.2387375	.1599404	.1173988	.0917374
.96	0.3988468	.2347080	.1575732	.1158113	.0905713
.97	0.3908073	.2307599	.1552459	.1142472	.0894211
.98	0.3829705	.2268912	.1529578	.1127063	.0882863
.99	0.3753300	.2230998	.1507079	.1111880	.0871669
1.00	0.3678794	.2193839	.1484955	.1096920	.0860625
1.01	.3606129	.2157416	.1463199	.1082179	.0849730
1.02	.3535245	.2121711	.1441804	.1067654	.0838961
1.03	.3466087	.2086706	.1420763	.1053342	.0828376
1.04	.3398603	.2052384	.1400068	.1039238	.0817913
1.05	.3332740	.2018728	.1379713	.1025339	.0807590
1.06	.3268451	.1985723	.1359691	.1011643	.0797406
1.07	.3205687	.1953354	.1339996	.0998145	.0787357
1.08	.3144403	.1921605	.1320622	.0984842	.0777442
1.09	.3084555	.1890461	.1301562	.0971731	.0767659
1.10	.3026101	.1859909	.1282811	.0958809	.0758007
1.11	.2969000	.1829935	.1264362	.0946074	.0748483
1.12	.2913212	.1800525	.1246210	.0933521	.0739085
1.13	.2858701	.1771666	.1228350	.0921149	.0729812
1.14	.2805430	.1743347	.1210775	.0908953	.0720661
1.15	.2753363	.1715554	.1193481	.0896932	.0711632
1.16	.2702467	.1688275	.1176462	.0885083	.0702722
1.17	.2652709	.1661500	.1159714	.0873402	.0693930
1.18	.2604057	.1635217	.1143231	.0861888	.0685253
1.19	.2556481	.1609416	.1127008	.0850537	.0676691

x	E ₅	E ₆	E ₇	E ₈	E ₉
.80	.0900742	.0754535	.0648276	.0567510	.0504880
.81	.0889685	.0745587	.0640776	.0561365	.0499234
.82	.0878770	.0736745	.0633364	.0554994	.0493653
.83	.0867996	.0728011	.0626041	.0548697	.0488134
.84	.0857360	.0719385	.0618804	.0542473	.0482679
.85	.0846860	.0710864	.0611653	.0536321	.0477285
.86	.0836496	.0702447	.0604586	.0530240	.0471952
.87	.0826264	.0694133	.0597603	.0524229	.0466680
.88	.0816163	.0685921	.0590703	.0518287	.0461467
.89	.0806191	.0677810	.0583885	.0512414	.0456314
.90	.0796346	.0669797	.0577147	.0506609	.0451219
.91	.0786628	.0661882	.0570488	.0500871	.0446181
.92	.0777033	.0654064	.0563909	.0495199	.0441201
.93	.0767561	.0646341	.0557407	.0489593	.0436277
.94	.0758209	.0638712	.0550981	.0484051	.0431409
.95	.0748976	.0631177	.0544632	.0478573	.0426596
.96	.0739861	.0623732	.0538358	.0473158	.0421837
.97	.0730861	.0616379	.0532157	.0467805	.0417132
.98	.0721976	.0609115	.0526030	.0462515	.0412481
.99	.0713204	.0601939	.0519975	.0457285	.0407882
1.00	.0704542	.0594850	.0513991	.0452115	.0403335
1.01	.0695991	.0587848	.0508077	.0447005	.0398839
1.02	.0687547	.0580930	.0502233	.0441953	.0394395
1.03	.0679211	.0574097	.0496458	.0436960	.0390000
1.04	.0670979	.0567346	.0490751	.0432024	.0385655
1.05	.0662852	.0560677	.0485111	.0427144	.0381359
1.06	.0654827	.0554088	.0479537	.0422321	.0377112
1.07	.0646903	.0547580	.0474029	.0417553	.0372913
1.08	.0639079	.0541150	.0468586	.0412840	.0368761
1.09	.0631354	.0534798	.0463206	.0408182	.0364656
1.10	.0623726	.0528522	.0457889	.0403576	.0360597
1.11	.0616193	.0522323	.0452635	.0399024	.0356584
1.12	.0608756	.0516198	.0447443	.0394523	.0352617
1.13	.0601411	.0510148	.0442311	.0390074	.0348694
1.14	.0594159	.0504170	.0437239	.0385677	.0344815
1.15	.0586998	.0498264	.0432227	.0381329	.0340980
1.16	.0579926	.0492430	.0427274	.0377032	.0337188
1.17	.0572943	.0486665	.0422379	.0372784	.0333439
1.18	.0566047	.0480970	.0417540	.0368584	.0329732
1.19	.0559237	.0475344	.0412759	.0364433	.0326067

x	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄
.80	.0454376	.0412979	.0378446	.0349211	.0324148
.81	.0449356	.0408460	.0374339	.0345447	.0320675
.82	.0444391	.0403992	.0370277	.0341724	.0317239
.83	.0439482	.0399572	.0366259	.0338042	.0313840
.84	.0434628	.0395202	.0362285	.0334399	.0310478
.85	.0429829	.0390880	.0358355	.0330796	.0307152
.86	.0425082	.0386605	.0354467	.0327232	.0303862
.87	.0420389	.0382378	.0350622	.0323706	.0300607
.88	.0415749	.0378197	.0346820	.0320219	.0297387
.89	.0411160	.0374063	.0343058	.0316770	.0294203
.90	.0406622	.0369974	.0339338	.0313358	.0291052
.91	.0402135	.0365930	.0335659	.0309983	.0287935
.92	.0397698	.0361931	.0332019	.0306644	.0284852
.93	.0393311	.0357976	.0328420	.0303342	.0281802
.94	.0388973	.0354064	.0324860	.0300076	.0278785
.95	.0384683	.0350196	.0321339	.0296845	.0275801
.96	.0380441	.0346371	.0317856	.0293649	.0272848
.97	.0376246	.0342587	.0314411	.0290488	.0269927
.98	.0372098	.0338846	.0311004	.0287361	.0267038
.99	.0367996	.0335145	.0307634	.0284267	.0264180
1.00	.0363940	.0331485	.0304301	.0281208	.0261353
1.01	.0359929	.0327866	.0301004	.0278181	.0258556
1.02	.035 963	.0324287	.0297743	.0275188	.0255789
1.03	.0352041	.0320747	.0294518	.0272226	.0253052
1.04	.0348163	.0317246	.0291328	.0269297	.0250344
1.05	.0344328	.0313783	.0288173	.0266400	.0247666
1.06	.0340536	.0310359	.0285053	.0263534	.0245016
1.07	.0336785	.0306972	.0281966	.0260698	.0242395
1.08	.0333077	.0303623	.0278913	.0257894	.0239802
1.09	.0329410	.0300311	.0275893	.0255120	.0237237
1.10	.0325784	.0297035	.0272907	.0252376	.0234700
1.11	.0322198	.0293795	.0269952	.0249662	.0232190
1.12	.0318652	.0290591	.0267031	.0246977	.0229706
1.13	.0315145	.0287422	.0264141	.0244321	.0227250
1.14	.0311678	.0284288	.0261282	.0241694	.0224820
1.15	.0308249	.0281188	.0258455	.0239095	.0222416
1.16	.0304858	.0278123	.0255658	.0236525	.0220038
1.17	.0301505	.0275091	.0252892	.0233982	.0217685
1.18	.0298189	.0272092	.0250156	.0231467	.0215358
1.19	.0294910	.0269127	.0247450	.0228979	.0213056

x	E ₁₅	E ₁₆	E ₁₇	E ₁₈	E ₁₉	E ₂₀
.80	.0302427	.0283423	.0266659	.0251762	.0238438	.0226449
.81	.0299202	.0280415	.0263840	.0249110	.0235933	.0224078
.82	.0296013	.0277439	.0261051	.0246486	.0233455	.0221731
.83	.0292858	.0274495	.0258291	.0243889	.0231004	.0219408
.84	.0289736	.0271582	.0255561	.0241320	.0228578	.0217111
.85	.0286648	.0268700	.0252860	.0238778	.0226177	.0214837
.86	.0283593	.0265849	.0250187	.0236262	.0223802	.0212587
.87	.0280571	.0263028	.0247543	.0233774	.0221452	.0210361
.88	.0277581	.0260237	.0244926	.0231311	.0219126	.0208158
.89	.0274623	.0257476	.0242338	.0228875	.0216825	.0205978
.90	.0271696	.0254745	.0239777	.0226465	.0214549	.0203821
.91	.0268802	.0252042	.0237243	.0224079	.0212296	.0201687
.92	.0265938	.0249369	.0234736	.0221720	.0210067	.0199575
.93	.0263104	.0246723	.0232255	.0219385	.0207862	.0197486
.94	.0260301	.0244106	.0229801	.0217074	.0205680	.0195418
.95	.0257529	.0241517	.0227373	.0214789	.0203520	.0193372
.96	.0254785	.0238956	.0224971	.0212527	.0201384	.0191347
.97	.0252071	.0236421	.0222594	.0210289	.0199269	.0189344
.98	.0249387	.0233914	.0220242	.0208075	.0197178	.0187362
.99	.0246731	.0231434	.0217915	.0205884	.0195108	.0185401
1.00	.0244103	.0228979	.0215613	.0203717	.0193060	.0183460
1.01	.0241503	.0226551	.0213336	.0201572	.0191033	.0181539
1.02	.0238932	.0224149	.0211082	.0199450	.0189028	.0179639
1.03	.0236388	.0221773	.0208853	.0197350	.0187044	.0177759
1.04	.0233871	.0219421	.0206647	.0195273	.0185081	.0175898
1.05	.0231381	.0217095	.0204464	.0193217	.0183139	.0174057
1.06	.0228917	.0214794	.0202305	.0191183	.0181217	.0172235
1.07	.0226480	.0212517	.0200168	.0189171	.0179315	.0170433
1.08	.0224069	.0210264	.0198054	.0187180	.0177433	.0168649
1.09	.0221684	.0208035	.0195963	.0185210	.0175571	.0166884
1.10	.0219324	.0205830	.0193894	.0183260	.0173729	.0165137
1.11	.0216990	.0203649	.0191846	.0181332	.0171906	.0163409
1.12	.0214680	.0201490	.0189821	.0179423	.0170102	.0161699
1.13	.0212396	.0199355	.0187816	.0177535	.0168318	.0160007
1.14	.0210135	.0197242	.0185833	.0175667	.0166552	.0158333
1.15	.0207899	.0195152	.0183871	.0173819	.0164804	.0156676
1.16	.0205687	.0193084	.0181930	.0171990	.0163075	.0155037
1.17	.0203498	.0191038	.0180010	.0170180	.0161364	.0153414
1.18	.0201333	.0189014	.0178109	.0168389	.0159672	.0151809
1.19	.0199191	.0187012	.0176229	.0166618	.0157997	.0150221

x	E_0	E_1	E_2	E_3	E_4
1.20	.2509952	.1584084	.1111041	.0839347	.0668242
1.21	.2464440	.1559213	.1095325	.0828315	.0659904
1.22	.2419919	.1534792	.1079855	.0817439	.0651675
1.23	.2376362	.1510812	.1064627	.0806717	.0643555
1.24	.2333744	.1487262	.1049637	.0796146	.0635540
1.25	.2292038	.1464134	.1034881	.0785723	.0627631
1.26	.2251222	.1441418	.1020353	.0775447	.0619825
1.27	.2211273	.1419106	.1006051	.0765316	.0612122
1.28	.2172166	.1397190	.0991970	.0755326	.0604519
1.29	.2133882	.1375660	.0978106	.0745476	.0597015
1.30	.2096398	.1354510	.0964455	.0735763	.0589609
1.31	.2059695	.1333730	.0951015	.0726186	.0582299
1.32	.2023752	.1313313	.0937780	.0716742	.0575085
1.33	.1988551	.1293252	.0924747	.0707429	.0567964
1.34	.1954072	.1273540	.0911913	.0698246	.0560936
1.35	.1920298	.1254168	.0899275	.0689191	.0553998
1.36	.1887212	.1235131	.0886829	.0680260	.0547151
1.37	.1854795	.1216422	.0874571	.0671453	.0540393
1.38	.1823033	.1198033	.0862499	.0662768	.0533722
1.39	.1791909	.1179959	.0850610	.0654203	.0527137
1.40	.1761407	.1162193	.0838899	.0645755	.0520637
1.41	.1731513	.1144729	.0827365	.0637424	.0514222
1.42	.1702211	.1127561	.0816004	.0629207	.0507889
1.43	.1673489	.1110683	.0804813	.0621104	.0501637
1.44	.1645332	.1094089	.0793789	.0613111	.0495466
1.45	.1617726	.1077774	.0782930	.0605227	.0489374
1.46	.1590659	.1061733	.0772233	.0597452	.0483361
1.47	.1564119	.1045959	.0761694	.0589782	.0477425
1.48	.1538092	.1030449	.0751313	.0582217	.0471565
1.49	.1512568	.1015196	.0741085	.0574755	.0465780
1.50	.1487534	.1000196	.0731008	.0567395	.0460070
1.51	.1462980	.0985444	.0721080	.0560135	.0454432
1.52	.1438894	.0970935	.0711298	.0552973	.0448867
1.53	.1415266	.0956664	.0701660	.0545908	.0443372
1.54	.1392085	.0942628	.0692164	.0538939	.0437948
1.55	.1369342	.0928821	.0682807	.0532064	.0432593
1.56	.1347026	.0915240	.0673587	.0525283	.0427307
1.57	.1325129	.0901879	.0664502	.0518592	.0422087
1.58	.1303640	.0888736	.0655549	.0511992	.0416935
1.59	.1282551	.0875805	.0646726	.0505481	.0411847

x	E ₅	E ₆	E ₇	E ₈	E ₉
1.20	.0552513	.0469785	.0408033	.0360329	.0322443
1.21	.0545872	.0464293	.0403363	.0356272	.0318860
1.22	.0539314	.0458868	.0398747	.0352261	.0315318
1.23	.0532838	.0453507	.0394185	.0348297	.0311815
1.24	.0526443	.0448211	.0389677	.0344378	.0308352
1.25	.0520127	.0442978	.0385221	.0340503	.0304927
1.26	.0513890	.0437808	.0380817	.0336673	.0301542
1.27	.0507730	.0432700	.0376465	.0332887	.0298194
1.28	.0501647	.0427653	.0372163	.0329144	.0294884
1.29	.0495640	.0422667	.0367911	.0325443	.0291611
1.30	.0489707	.0417740	.0363709	.0321785	.0288375
1.31	.0483847	.0412872	.0359556	.0318169	.0285175
1.32	.0478060	.0408063	.0355452	.0314594	.0282011
1.33	.0472345	.0403311	.0351395	.0311060	.0278883
1.34	.0466701	.0398616	.0347385	.0307566	.0275790
1.35	.0461126	.0393976	.0343422	.0304112	.0272731
1.36	.0455620	.0389393	.0339506	.0300697	.0269707
1.37	.0450183	.0384864	.0335634	.0297322	.0266717
1.38	.0444812	.0380389	.0331808	.0293984	.0263761
1.39	.0439508	.0375967	.0328026	.0290685	.0260838
1.40	.0434269	.0371599	.0324289	.0287424	.0257947
1.41	.0429095	.0367282	.0320594	.0284199	.0255089
1.42	.0423985	.0363016	.0316943	.0281012	.0252263
1.43	.0418937	.0358802	.0313334	.0277860	.0249469
1.44	.0413952	.0354637	.0309767	.0274745	.0246706
1.45	.0409027	.0350523	.0306241	.0271665	.0243974
1.46	.0404164	.0346457	.0302756	.0268620	.0241272
1.47	.0399360	.0342439	.0299312	.0265610	.0238601
1.48	.0394615	.0338469	.0295907	.0262633	.0235960
1.49	.0389928	.0334547	.0292542	.0259691	.0233348
1.50	.0385299	.0330671	.0289216	.0256783	.0230766
1.51	.0380727	.0326840	.0285928	.0253907	.0228213
1.52	.0376210	.0323056	.0282679	.0251064	.0225688
1.53	.0371749	.0319316	.0279467	.0248253	.0223191
1.54	.0367343	.0315621	.0276293	.0245474	.0220723
1.55	.0362990	.0311969	.0273155	.0242727	.0218282
1.56	.0358691	.0308361	.0270053	.0240011	.0215868
1.57	.0354444	.0304795	.0266987	.0237326	.0213481
1.58	.0350249	.0301272	.0263957	.0234671	.0211121
1.59	.0346105	.0297790	.0260962	.0232047	.0208788

x	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄
1.20	.0291668	.0266194	.0244774	.0226518	.0210779
1.21	.0288461	.0263293	.0242126	.0224083	.0208526
1.22	.0285290	.0260425	.0239508	.0221675	.0206297
1.23	.0282155	.0257588	.0236918	.0219293	.0204092
1.24	.0279054	.0254782	.0234356	.0216937	.0201911
1.25	.0275988	.0252006	.0231822	.0214606	.0199753
1.26	.0272955	.0249262	.0229316	.0212300	.0197619
1.27	.0269957	.0246547	.0226836	.0210019	.0195507
1.28	.0266991	.0243862	.0224384	.0207763	.0193418
1.29	.0264059	.0241207	.0221959	.0205532	.0191352
1.30	.0261159	.0238581	.0219560	.0203324	.0189307
1.31	.0258291	.0235984	.0217187	.0201140	.0187285
1.32	.0255455	.0233415	.0214840	.0198980	.0185285
1.33	.0252651	.0230875	.0212519	.0196844	.0183305
1.34	.0249878	.0228362	.0210223	.0194730	.0181348
1.35	.0247135	.0225877	.0207952	.0192639	.0179411
1.36	.0244423	.0223419	.0205705	.0190571	.0177495
1.37	.0241741	.0220988	.0203483	.0188525	.0175599
1.38	.0239088	.0218584	.0201285	.0186501	.0173724
1.39	.0236465	.0216207	.0199111	.0184499	.0171869
1.40	.0233872	.0213855	.0196961	.0182519	.0170034
1.41	.0231306	.0211529	.0194834	.0180560	.0168219
1.42	.0228770	.0209229	.0192730	.0178622	.0166423
1.43	.0226261	.0206954	.0190650	.0176705	.0164646
1.44	.0223780	.0204703	.0188591	.0174809	.0162889
1.45	.0221327	.0202478	.0186555	.0172933	.0161150
1.46	.0218901	.0200277	.0184542	.0171078	.0159430
1.47	.0216501	.0198100	.0182550	.0169242	.0157728
1.48	.0214128	.0195947	.0180580	.0167427	.0156045
1.49	.0211782	.0193817	.0178631	.0165631	.0154380
1.50	.0209461	.0191711	.0176703	.0163854	.0152732
1.51	.0207167	.0189628	.0174797	.0162096	.0151103
1.52	.0204897	.0187568	.0172911	.0160358	.0149490
1.53	.0202653	.0185530	.0171045	.0158638	.0147895
1.54	.0200433	.0183514	.0169200	.0156937	.0146318
1.55	.0198238	.0181521	.0167375	.0155254	.0144757
1.56	.0196067	.0179550	.0165569	.0153589	.0143212
1.57	.0193921	.0177600	.0163784	.0151943	.0141685
1.58	.0191798	.0175671	.0162017	.0150314	.0140173
1.59	.0189698	.0173764	.0160270	.0148702	.0138678

x	E ₁₅	E ₁₆	E ₁₇	E ₁₈	E ₁₉	E ₂₀
1.20	.0197072	.0185030	.0174369	.0164865	.0156339	.0148649
1.21	.0194975	.0183070	.0172529	.0163130	.0154699	.0147094
1.22	.0192901	.0181131	.0170708	.0161414	.0153076	.0145555
1.23	.0190849	.0179212	.0168906	.0159716	.0151471	.0144032
1.24	.0188819	.0177314	.0167123	.0158036	.0149882	.0142526
1.25	.0186811	.0175436	.0165360	.0156373	.0148310	.0141035
1.26	.0184824	.0173577	.0163615	.0154729	.0146755	.0139559
1.27	.0182859	.0171739	.0161888	.0153101	.0145215	.0138100
1.28	.0180914	.0169920	.0160180	.0151491	.0143692	.0136655
1.29	.0178990	.0168121	.0158490	.0149897	.0142186	.0135226
1.30	.0177087	.0166340	.0156817	.0148321	.0140694	.0133811
1.31	.0175204	.0164579	.0155163	.0146761	.0139219	.0132412
1.32	.0173341	.0162836	.0153526	.0145218	.0137759	.0131027
1.33	.0171498	.0161112	.0151906	.0143690	.0136315	.0129657
1.34	.0169675	.0159406	.0150303	.0142179	.0134885	.0128301
1.35	.0167871	.0157718	.0148718	.0140684	.0133471	.0126959
1.36	.0166087	.0156049	.0147149	.0139205	.0132072	.0125631
1.37	.0164321	.0154397	.0145597	.0137741	.0130687	.0124317
1.38	.0162575	.0152762	.0144061	.0136293	.0129317	.0123017
1.39	.0160847	.0151145	.0142541	.0134860	.0127961	.0121731
1.40	.0159137	.0149545	.0141038	.0133442	.0126619	.0120458
1.41	.0157446	.0147962	.0139550	.0132039	.0125292	.0119198
1.42	.0155773	.0146396	.0138079	.0130651	.0123979	.0117952
1.43	.0154118	.0144847	.0136622	.0129278	.0122679	.0116719
1.44	.0152480	.0143314	.0135182	.0127919	.0121393	.0115499
1.45	.0150860	.0141797	.0133756	.0126574	.0120121	.0114291
1.46	.0149257	.0140297	.0132346	.0125243	.0118862	.0113096
1.47	.0147671	.0138812	.0130950	.0123927	.0117616	.0111914
1.48	.0146102	.0137343	.0129569	.0122624	.0116383	.0110744
1.49	.0144550	.0135890	.0128203	.0121336	.0115163	.0109586
1.50	.0143015	.0134452	.0126851	.0120060	.0113956	.0108440
1.51	.0141495	.0133029	.0125514	.0118798	.0112762	.0107307
1.52	.0139992	.0131622	.0124191	.0117550	.0111580	.0106185
1.53	.0138505	.0130230	.0122882	.0116315	.0110411	.0105075
1.54	.0137034	.0128852	.0121586	.0115092	.0109254	.0103977
1.55	.0135579	.0127489	.0120305	.0113883	.0108109	.0102890
1.56	.0134139	.0126140	.0119036	.0112686	.0106976	.0101815
1.57	.0132715	.0124806	.0117782	.0111502	.0105855	.0100750
1.58	.0131305	.0123486	.0116540	.0110330	.0104746	.0099697
1.59	.0129911	.0122180	.0115312	.0109171	.0103649	.0098666

x	E_0	E_1	E_2	E_3	E_4
1.60	.1261853	.0863083	.0638032	.0499057	.0406825
1.61	.1241538	.0850567	.0629464	.0492720	.0401866
1.62	.1221597	.0838251	.0621020	.0486467	.0396970
1.63	.1202022	.0826134	.0612698	.0480299	.0392136
1.64	.1182805	.0814210	.0604497	.0474213	.0387364
1.65	.1163939	.0802476	.0596413	.0468209	.0382652
1.66	.1145416	.0790930	.0588446	.0462284	.0377999
1.67	.1127228	.0779567	.0580594	.0456439	.0373406
1.68	.1109369	.0768384	.0572854	.0450672	.0368870
1.69	.1091832	.0757378	.0565226	.0444982	.0364392
1.70	.1074609	.0746546	.0557706	.0439367	.0359970
1.71	.1057695	.0735885	.0550294	.0433827	.0355604
1.72	.1041082	.0725392	.0542988	.0428361	.0351293
1.73	.1024765	.0715063	.0535786	.0422967	.0347037
1.74	.1008738	.0704895	.0528686	.0417645	.0342834
1.75	.0992994	.0694887	.0521687	.0412393	.0338684
1.76	.0977528	.0685034	.0514788	.0407211	.0334586
1.77	.0962333	.0675335	.0507986	.0402097	.0330539
1.78	.0947405	.0665787	.0501281	.0397051	.0326544
1.79	.0932738	.0656386	.0494670	.0392071	.0322598
1.80	.0918327	.0647131	.0488153	.0387157	.0318702
1.81	.0904167	.0638019	.0481727	.0382308	.0314855
1.82	.0890251	.0629047	.0475392	.0377522	.0311056
1.83	.0876577	.0620213	.0469146	.0372800	.0307304
1.84	.0863138	.0611515	.0462987	.0368139	.0303599
1.85	.0849931	.0602950	.0456915	.0363540	.0299941
1.86	.0836950	.0594515	.0450928	.0359001	.0296328
1.87	.0824191	.0586210	.0445024	.0354521	.0292761
1.88	.0811649	.0578031	.0439203	.0350100	.0289238
1.89	.0799322	.0569976	.0433463	.0345737	.0285759
1.90	.0787203	.0562044	.0427803	.0341430	.0282323
1.91	.0775290	.0554231	.0422222	.0337180	.0278930
1.92	.0763578	.0546537	.0416718	.0332986	.0275579
1.93	.0752063	.0538959	.0411291	.0328846	.0272270
1.94	.0740742	.0531495	.0405938	.0324759	.0269002
1.95	.0729611	.0524144	.0400660	.0320727	.0265775
1.96	.0718665	.0516903	.0395455	.0316746	.0262587
1.97	.0707903	.0509770	.0390322	.0312817	.0259440
1.98	.0697319	.0502744	.0385259	.0308939	.0256331
1.99	.0686912	.0495823	.0380267	.0305112	.0253261

x	E ₅	E ₆	E ₇	E ₈	E ₉
1.60	.0342011	.0294349	.0258001	.0229452	.0206480
1.61	.0337968	.0290950	.0255075	.0226887	.0204199
1.62	.0333974	.0287590	.0252182	.0224350	.0201942
1.63	.0330028	.0284270	.0249323	.0221843	.0199711
1.64	.0326131	.0280989	.0246496	.0219364	.0197505
1.65	.0322281	.0277747	.0243703	.0216913	.0195324
1.66	.0318478	.0274543	.0240941	.0214490	.0193167
1.67	.0314721	.0271377	.0238212	.0212094	.0191034
1.68	.0311009	.0268249	.0235514	.0209725	.0188925
1.69	.0307343	.0265157	.0232847	.0207383	.0186840
1.70	.0303721	.0262102	.0230210	.0205068	.0184777
1.71	.0300144	.0259082	.0227604	.0202779	.0182738
1.72	.0296609	.0256099	.0225029	.0200516	.0180722
1.73	.0293118	.0253150	.0222482	.0198279	.0178728
1.74	.0289668	.0250236	.0219965	.0196066	.0176756
1.75	.0286261	.0247357	.0217478	.0193879	.0174806
1.76	.0282894	.0244511	.0215018	.0191717	.0172878
1.77	.0279569	.0241699	.0212587	.0189579	.0170972
1.78	.0276283	.0238919	.0210184	.0187465	.0169087
1.79	.0273038	.0236173	.0207809	.0185375	.0167223
1.80	.0269831	.0233459	.0205461	.0183309	.0165379
1.81	.0266664	.0230776	.0203139	.0181266	.0163556
1.82	.0263534	.0228125	.0200845	.0179246	.0161754
1.83	.0260442	.0225505	.0198577	.0177249	.0159971
1.84	.0257388	.0222916	.0196335	.0175274	.0158209
1.85	.0254370	.0220357	.0194118	.0173322	.0156466
1.86	.0251389	.0217829	.0191928	.0171392	.0154742
1.87	.0248443	.0215329	.0189762	.0169483	.0153038
1.88	.0245533	.0212860	.0187621	.0167596	.0151353
1.89	.0242659	.0210419	.0185504	.0165731	.0149686
1.90	.0239818	.0208006	.0183412	.0163886	.0148038
1.91	.0237012	.0205622	.0181344	.0162062	.0146408
1.92	.0234239	.0203266	.0179300	.0160259	.0144797
1.93	.0231500	.0200937	.0177279	.0158476	.0143203
1.94	.0228794	.0198636	.0175281	.0156713	.0141627
1.95	.0226120	.0196361	.0173306	.0154971	.0140069
1.96	.0223478	.0194113	.0171354	.0153247	.0138527
1.97	.0220868	.0191892	.0169424	.0151543	.0137004
1.98	.0218289	.0189696	.0167516	.0149859	.0135497
1.99	.0215741	.0187526	.0165630	.0148193	.0134006

x	E_{10}	E_{11}	E_{12}	E_{13}	E_{14}
1.60	.0187622	.0171877	.0158542	.0147108	.0137199
1.61	.0185568	.0170011	.0156833	.0145531	.0135736
1.62	.0183538	.0168166	.0155142	.0143971	.0134289
1.63	.0181530	.0166340	.0153469	.0142428	.0132857
1.64	.0179543	.0164535	.0151815	.0140902	.0131440
1.65	.0177579	.0162749	.0150178	.0139392	.0130039
1.66	.0175637	.0160983	.0148560	.0137898	.0128652
1.67	.0173716	.0159237	.0146959	.0136421	.0127281
1.68	.0171816	.0157509	.0145375	.0134959	.0125924
1.69	.0169937	.0155800	.0143808	.0133513	.0124581
1.70	.0168079	.0154110	.0142259	.0132083	.0123253
1.71	.0166242	.0152438	.0140726	.0130668	.0121940
1.72	.0164424	.0150785	.0139210	.0129268	.0120640
1.73	.0162627	.0149150	.0137710	.0127884	.0119354
1.74	.0160850	.0147533	.0136227	.0126514	.0118082
1.75	.0159092	.0145933	.0134760	.0125159	.0116824
1.76	.0157354	.0144351	.0133308	.0123819	.0115579
1.77	.0155634	.0142786	.0131873	.0122493	.0114347
1.78	.0153934	.0141238	.0130453	.0121181	.0113129
1.79	.0152253	.0139707	.0129048	.0119884	.0111924
1.80	.0150590	.0138193	.0127658	.0118600	.0110731
1.81	.0148945	.0136695	.0126284	.0117331	.0109552
1.82	.0147318	.0135214	.0124924	.0116075	.0108385
1.83	.0145710	.0133749	.0123580	.0114832	.0107230
1.84	.0144119	.0132300	.0122249	.0113603	.0106088
1.85	.0142546	.0130866	.0120934	.0112387	.0104958
1.86	.0140990	.0129449	.0119632	.0111184	.0103840
1.87	.0139451	.0128046	.0118345	.0109994	.0102734
1.88	.0137929	.0126660	.0117071	.0108817	.0101640
1.89	.0136424	.0125288	.0115811	.0107653	.0100558
1.90	.0134935	.0123931	.0114565	.0106501	.0099487
1.91	.0133463	.0122589	.0113333	.0105362	.0098428
1.92	.0132007	.0121262	.0112113	.0104234	.0097380
1.93	.0130567	.0119949	.0110907	.0103119	.0096343
1.94	.0129143	.0118650	.0109714	.0102016	.0095318
1.95	.0127734	.0117366	.0108534	.0100925	.0094303
1.96	.0126341	.0116096	.0107367	.0099845	.0093299
1.97	.0124964	.0114839	.0106212	.0098778	.0092306
1.98	.0123601	.0113596	.0105070	.0097721	.0091323
1.99	.0122254	.0112367	.0103940	.0096676	.0090351

x	E ₁₅	E ₁₆	E ₁₇	E ₁₈	E ₁₉	E ₂₀
1.60	.0128532	.0120888	.0114097	.0108024	.0102563	.0097624
1.61	.0127167	.0119609	.0112894	.0106889	.0101488	.0096604
1.62	.0125817	.0118344	.0111704	.0105766	.0100425	.0095595
1.63	.0124481	.0117093	.0110527	.0104655	.0099373	.0094596
1.64	.0123160	.0115855	.0109362	.0103556	.0098332	.0093607
1.65	.0121853	.0114629	.0108210	.0102468	.0097302	.0092629
1.66	.0120559	.0113417	.0107070	.0101391	.0096282	.0091661
1.67	.0119279	.0112218	.0105942	.0100326	.0095274	.0090703
1.68	.0118013	.0111032	.0104825	.0099273	.0094276	.0089756
1.69	.0116761	.0109858	.0103721	.0098230	.0093288	.0088818
1.70	.0115522	.0108697	.0102628	.0097198	.0092311	.0087890
1.71	.0114296	.0107547	.0101547	.0096177	.0091344	.0086972
1.72	.0113083	.0106411	.0100477	.0095167	.0090387	.0086063
1.73	.0111883	.0105286	.0099419	.0094168	.0089441	.0085164
1.74	.0110696	.0104173	.0098371	.0093179	.0088504	.0084274
1.75	.0109521	.0103072	.0097335	.0092200	.0087577	.0083394
1.76	.0108359	.0101982	.0096310	.0091232	.0086660	.0082522
1.77	.0107210	.0100905	.0095296	.0090274	.0085753	.0081660
1.78	.0106072	.0099838	.0094292	.0089326	.0084855	.0080807
1.79	.0104947	.0098783	.0093299	.0088388	.0083966	.0079963
1.80	.0103834	.0097739	.0092316	.0087460	.0083087	.0079128
1.81	.0102732	.0096706	.0091344	.0086542	.0082217	.0078302
1.82	.0101643	.0095685	.0090382	.0085633	.0081356	.0077484
1.83	.0100565	.0094673	.0089430	.0084734	.0080504	.0076674
1.84	.0099498	.0093673	.0088488	.0083844	.0079661	.0075874
1.85	.0098443	.0092683	.0087557	.0082964	.0078827	.0075081
1.86	.0097399	.0091704	.0086635	.0082093	.0078002	.0074297
1.87	.0096366	.0090735	.0085723	.0081231	.0077185	.0073521
1.88	.0095344	.0089777	.0084820	.0080379	.0076377	.0072753
1.89	.0094333	.0088829	.0083927	.0079535	.0075578	.0071993
1.90	.0093333	.0087890	.0083043	.0078700	.0074786	.0071242
1.91	.0092343	.0086962	.0082169	.0077874	.0074004	.0070498
1.92	.0091364	.0086043	.0081304	.0077057	.0073229	.0069762
1.93	.0090396	.0085135	.0080448	.0076248	.0072462	.0069033
1.94	.0089437	.0084235	.0079601	.0075448	.0071704	.0068312
1.95	.0088489	.0083346	.0078764	.0074656	.0070953	.0067599
1.96	.0087551	.0082466	.0077934	.0073873	.0070211	.0066893
1.97	.0086623	.0081595	.0077114	.0073097	.0069476	.0066195
1.98	.0085705	.0080733	.0076303	.0072330	.0068749	.0065504
1.99	.0084797	.0079881	.0075499	.0071571	.0068029	.0064820

x	E ₀	E ₁	E ₂	E ₃	E ₄
2.0	6.76676(-2)	4.89005(-2)	3.75343(-2)	3.01334(-2)	2.50228(-2)
2.1	5.83126	4.26143	3.29663	2.66136	2.21893
2.2	5.03651	3.71911	2.89827	2.35207	1.96859
2.3	4.35908	3.25023	2.55036	2.08002	1.74728
2.4	3.77991	2.84403	2.24613	1.84054	1.55150
2.5	3.28340	2.49149	1.97977	1.62954	1.37822
2.6	2.85668	2.18502	1.74630	1.44349	1.22476
2.7	2.48909	1.91819	1.54145	1.27932	1.08879
2.8	2.17179	1.68553	1.36152	1.13437	0.96826
2.9	1.89735	1.48240	1.20336	1.00629	0.86136
3.0	1.65957	1.30484	1.06419	0.89306	0.76650
3.1	1.45320	1.14944	0.94165	0.79290	0.68231
3.2	1.27382	1.01330	0.83366	0.70425	0.60754
3.3	11.17672(-3)	8.93904(-3)	7.38433(-3)	6.25744(-3)	5.41120(-3)
3.4	9.81567	7.89097	6.54396	5.56190	4.82093
3.5	8.62782	6.97014	5.80189	4.94538	4.29619
3.6	7.58992	6.16041	5.14623	4.39865	3.82953
3.7	6.68203	5.44782	4.56658	3.91360	3.41440
3.8	5.88705	4.82025	4.05383	3.48310	3.04500
3.9	5.19023	4.26715	3.60004	3.10087	2.71618
4.0	4.57891	3.77935	3.19823	2.76136	2.42340
4.1	4.04212	3.34888	2.84226	2.45969	2.16264
4.2	3.57038	2.96876	2.52678	2.19156	1.93034
4.3	3.15548	2.63291	2.24704	1.95315	1.72334
4.4	2.79030	2.33601	1.99890	1.74110	1.53883
4.5	2.46867	2.07340	1.77869	1.55244	1.37434
4.6	2.18518	1.84101	1.58321	1.38454	1.22765
4.7	1.93517	1.63525	1.40960	1.23507	1.09682
4.8	1.71453	1.45299	1.25538	1.10197	0.98010
4.9	1.51971	1.29148	1.11831	0.98342	0.87594
5.0	1.34759	1.14830	0.99647	0.87780	0.78298
5.1	1.19544	1.02130	0.88812	0.78368	0.70000
5.2	10.6088(-4)	9.0862(-4)	7.9173(-4)	6.9978(-4)	6.2590(-4)
5.3	9.4181	8.0861	7.0597	6.2498	5.5974
5.4	8.3640	7.1980	6.2964	5.5827	5.0064
5.5	7.4305	6.4093	5.6168	4.9877	4.4784
5.6	6.6033	5.7084	5.0116	4.4569	4.0067
5.7	5.8701	5.0855	4.4725	3.9832	3.5852
5.8	5.2199	4.5316	3.9922	3.5604	3.2084
5.9	4.6431	4.0390	3.5641	3.1830	2.8716

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	E ₅	E ₆	E ₇	E ₈	E ₉
2.0	2.13224(-2)	1.85381(-2)	1.63765(-2)	1.46546(-2)	1.32533(-2)
2.1	1.89647	1.66261	1.46253	1.31062	1.18667
2.2	1.68735	1.47363	1.30639	1.17232	1.06265
2.3	1.50179	1.31436	1.16714	1.04878	0.95171
2.4	1.33705	1.17258	1.04294	0.93839	0.85246
2.5	1.19074	1.04633	0.93211	0.83975	0.76364
2.6	1.06074	0.93388	0.83321	0.75157	0.68416
2.7	0.94520	0.83370	0.74493	0.67275	0.61302
2.8	0.84247	0.74442	0.66611	0.60227	0.54933
2.9	0.75110	0.66483	0.59572	0.53925	0.49231
3.0	0.66980	0.59386	0.53285	0.48288	0.44126
3.1	0.59744	0.53057	0.47669	0.43245	0.39554
3.2	0.53302	0.47411	0.42651	0.38734	0.35459
3.3	4.75655(-3)	4.23731(-3)	3.81667(-3)	3.46973(-3)	3.17913(-3)
3.4	4.24552	3.78770	3.41585	3.10848	2.85055
3.5	3.79018	3.38635	3.05753	2.78515	2.55617
3.6	3.38435	3.02801	2.73715	2.49571	2.29239
3.7	3.02256	2.70801	2.45065	2.23659	2.05602
3.8	2.69995	2.42219	2.19441	2.00458	1.84417
3.9	2.41221	2.16686	1.96519	1.79681	1.65429
4.0	2.15551	1.93872	1.76013	1.61073	1.48409
4.1	1.92646	1.73484	1.57664	1.44406	1.33150
4.2	1.72203	1.55261	1.41244	1.29476	1.19470
4.3	1.53955	1.38970	1.26548	1.16100	1.07203
4.4	1.37662	1.24404	1.13392	1.04115	0.96203
4.5	1.23112	1.11380	1.01615	0.93376	0.86339
4.6	1.10116	0.99730	0.91071	0.83751	0.77491
4.7	0.98506	0.89310	0.81628	0.75125	0.69555
4.8	0.88132	0.79988	0.73172	0.67393	0.62436
4.9	0.78862	0.71647	0.65598	0.60461	0.56050
5.0	0.70576	0.64183	0.58813	0.54247	0.50320
5.1	0.63169	0.57503	0.52735	0.48675	0.45179
5.2	5.6546(-4)	5.1523(-4)	4.7290(-4)	4.3679(-4)	4.0566(-4)
5.3	5.0625	4.6170	4.2410	3.9198	3.6426
5.4	4.5328	4.1377	3.8037	3.5180	3.2711
5.5	4.0591	3.7086	3.4118	3.1576	2.9376
5.6	3.6353	3.3242	3.0605	2.8343	2.6383
5.7	3.2561	2.9800	2.7456	2.5443	2.3697
5.8	2.9167	2.6717	2.4633	2.2841	2.1285
5.9	2.6130	2.3955	2.2102	2.0506	1.9120

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	E ₁₀	E ₁₁	E ₁₂	E ₁₃	E ₁₄
2.0	1.20921(-2)	1.11151(-2)	1.02823(-2)	0.95642(-2)	0.89390(-2)
2.1	1.08374	0.99698	0.92291	0.85896	0.80322
2.2	0.97159	0.89433	0.82844	0.77148	0.72177
2.3	0.87077	0.80231	0.74369	0.69295	0.64862
2.4	0.78066	0.71982	0.66766	0.62245	0.58292
2.5	0.69993	0.64587	0.59944	0.55916	0.52389
2.6	0.62762	0.57956	0.53823	0.50233	0.47087
2.7	0.56282	0.52009	0.48330	0.45130	0.42323
2.8	0.50476	0.46677	0.43401	0.40548	0.38044
2.9	0.45273	0.41894	0.38976	0.36433	0.34198
3.0	0.40610	0.37604	0.35005	0.32738	0.30743
3.1	0.36431	0.33756	0.31441	0.29419	0.27638
3.2	0.32684	0.30303	0.28241	0.26438	0.24848
3.3	2.93245(-3)	2.72061(-3)	2.53683(-3)	2.37597(-3)	2.23404(-3)
3.4	2.63127	2.44270	2.27892	2.13541	2.00868
3.5	2.36120	2.19332	2.04734	1.91931	1.80614
3.6	2.11901	1.96953	1.83940	1.72516	1.62409
3.7	1.90181	1.76868	1.65267	1.55072	1.46045
3.8	1.70699	1.58842	1.48498	1.39399	1.31336
3.9	1.53224	1.42662	1.33437	1.25315	1.18112
4.0	1.37548	1.28137	1.19910	1.12660	1.06225
4.1	1.23484	1.15099	1.07760	1.01288	0.95538
4.2	1.10865	1.03392	0.96846	0.91067	0.85929
4.3	0.99542	0.92882	0.87042	0.81881	0.77290
4.4	0.89382	0.83445	0.78234	0.73625	0.69522
4.5	0.80264	0.74971	0.70321	0.66205	0.62537
4.6	0.72081	0.67361	0.63211	0.59534	0.56256
4.7	0.64735	0.60527	0.56823	0.53538	0.50607
4.8	0.58142	0.54389	0.51082	0.48148	0.45528
4.9	0.52224	0.48876	0.45924	0.43303	0.40960
5.0	0.46910	0.43924	0.41289	0.38946	0.36851
5.1	0.42140	0.39476	0.37122	0.35029	0.33156
5.2	3.7857(-4)	3.5480(-4)	3.3378(-4)	3.1507(-4)	2.9832(-4)
5.3	3.4011	3.1890	3.0013	2.8341	2.6843
5.4	3.0558	2.8665	2.6988	2.5494	2.4153
5.5	2.7456	2.5767	2.4269	2.2933	2.1734
5.6	2.4671	2.3163	2.1825	2.0631	1.9558
5.7	2.2169	2.0823	1.9628	1.8560	1.7600
5.8	1.9923	1.8720	1.7652	1.6698	1.5839
5.9	1.7904	1.6831	1.5877	1.5023	1.4255

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	E ₁₅	E ₁₆	E ₁₇	E ₁₈	E ₁₉	E ₂₀
2.0	0.83898(-2)	0.79037(-2)	0.74705(-2)	0.70820(-2)	0.67317(-2)	0.64143(-2)
2.1	0.75421	0.71079	0.67206	0.63731	0.60596	0.57753
2.2	0.67803	0.63924	0.60462	0.57354	0.54547	0.52001
2.3	0.60958	0.57492	0.54397	0.51616	0.49104	0.46824
2.4	0.54806	0.51710	0.48942	0.46454	0.44206	0.42163
2.5	0.49277	0.46511	0.44036	0.41809	0.39796	0.37966
2.6	0.44308	0.41836	0.39623	0.37630	0.35828	0.34189
2.7	0.39842	0.37632	0.35653	0.33870	0.32256	0.30788
2.8	0.35827	0.33852	0.32082	0.30487	0.29041	0.27726
2.9	0.32218	0.30453	0.28870	0.27442	0.26147	0.24969
3.0	0.28974	0.27396	0.25980	0.24702	0.23543	0.22486
3.1	0.26058	0.24647	0.23380	0.22236	0.21198	0.20252
3.2	0.23436	0.22175	0.21041	0.20017	0.19087	0.18239
3.3	2.10792(-3)	1.99514(-3)	1.89370(-3)	1.80200(-3)	1.71870(-3)	1.64271(-3)
3.4	1.89598	1.79513	1.70436	1.62226	1.54764	1.47954
3.5	1.70542	1.61523	1.53401	1.46049	1.39365	1.33261
3.6	1.53407	1.45340	1.38072	1.31489	1.25501	1.20030
3.7	1.37999	1.30784	1.24278	1.18384	1.13018	1.08116
3.8	1.24143	1.17689	1.11866	1.06587	1.01780	0.97385
3.9	1.11682	1.05909	1.00697	0.95969	0.91662	0.87722
4.0	1.00476	0.95311	0.90645	0.86411	0.82551	0.79019
4.1	0.90397	0.85776	0.81699	0.77807	0.74348	0.71181
4.2	0.81333	0.77197	0.73458	0.70061	0.66961	0.64122
4.3	0.73179	0.69479	0.66131	0.63088	0.60310	0.57764
4.4	0.65846	0.62534	0.59536	0.56810	0.54321	0.52038
4.5	0.59249	0.56285	0.53601	0.51159	0.48927	0.46880
4.6	0.53315	0.50662	0.48259	0.46070	0.44070	0.42235
4.7	0.47977	0.45603	0.43450	0.41489	0.39696	0.38050
4.8	0.43174	0.41049	0.39121	0.37364	0.35757	0.34281
4.9	0.38854	0.36952	0.35225	0.33650	0.32210	0.30886
5.0	0.34967	0.33264	0.31717	0.30306	0.29015	0.27827
5.1	0.31470	0.29945	0.28560	0.27295	0.26137	0.25072
5.2	2.8324(-4)	2.6958(-4)	2.5717(-4)	2.4584(-4)	2.3546(-4)	2.2591(-4)
5.3	2.5492	2.4270	2.3158	2.2142	2.1211	2.0355
5.4	2.2945	2.1850	2.0854	1.9944	1.9109	1.8341
5.5	2.0653	1.9672	1.8780	1.7964	1.7215	1.6526
5.6	1.8590	1.7712	1.6912	1.6181	1.5510	1.4891
5.7	1.6734	1.5948	1.5231	1.4575	1.3973	1.3418
5.8	1.5063	1.4359	1.3717	1.3129	1.2589	1.2091
5.9	1.3560	1.2929	1.2354	1.1827	1.1343	1.0896

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	E ₀	E ₁	E ₂	E ₃	E ₄
6.0	4.1313(-4)	3.6008(-4)	3.1826(-4)	2.8460(-4)	2.5704(-4)
6.1	3.6768	3.2109	2.8424	2.5451	2.3012
6.2	3.2733	2.8638	2.5390	2.2763	2.0603
6.3	2.9148	2.5547	2.2683	2.0362	1.8449
6.4	2.5962	2.2795	2.0269	1.8217	1.6522
6.5	2.3130	2.0343	1.8115	1.6300	1.4798
6.6	2.0612	1.8158	1.6192	1.4586	1.3256
6.7	1.8372	1.6211	1.4475	1.3055	1.1875
6.8	1.6379	1.4476	1.2942	1.1685	1.0639
6.9	1.4606	1.2928	1.1573	1.0461	0.9533
7.0	1.3027	1.1548	1.0351	0.9366	0.8543
7.1	1.1621	1.0317	0.9259	0.8386	0.7656
7.2	10.3692(-5)	9.2188(-5)	8.2831(-5)	7.5100(-5)	6.8622(-5)
7.3	9.2540	8.2387	7.4112	6.7261	6.1511
7.4	8.2602	7.3640	6.6319	6.0247	5.5142
7.5	7.3745	6.5831	5.9353	5.3970	4.9437
7.6	6.5849	5.8859	5.3125	4.8352	4.4326
7.7	5.8809	5.2633	4.7556	4.3323	3.9747
7.8	5.2530	4.7072	4.2576	3.8821	3.5644
7.9	4.6930	4.2104	3.8122	3.4790	3.1967
8.0	4.1933	3.7666	3.4138	3.1181	2.8672
8.1	3.7474	3.3700	3.0573	2.7949	2.5719
8.2	3.3494	3.0155	2.7384	2.5054	2.3071
8.3	2.9942	2.6986	2.4530	2.2461	2.0698
8.4	2.6770	2.4154	2.1975	2.0138	1.8570
8.5	2.3937	2.1621	1.9689	1.8057	1.6662
8.6	2.1408	1.9356	1.7642	1.6192	1.4952
8.7	1.9148	1.7331	1.5810	1.4521	1.3418
8.8	1.7129	1.5519	1.4169	1.3024	1.2042
8.9	1.5325	1.3898	1.2700	1.1682	1.0808
9.0	1.3712	1.2447	1.1384	1.0479	0.9701
9.1	1.2271	1.1150	1.0205	0.9400	0.8708
9.2	10.9825(-6)	9.9881(-6)	9.1492(-6)	8.4335(-6)	7.8169(-6)
9.3	9.8306	8.9485	8.2033	7.5668	7.0177
9.4	8.8004	8.0179	7.3558	6.7896	6.3006
9.5	7.8791	7.1848	6.5965	6.0927	5.6571
9.6	7.0551	6.4388	5.9160	5.4677	5.0797
9.7	6.3179	5.7709	5.3061	4.9071	4.5614
9.8	5.6583	5.1727	4.7595	4.4044	4.0963
9.9	5.0681	4.6369	4.2695	3.9533	3.6788
10.0	4.5400	4.1570	3.8302	3.5488	3.3041

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	E_5	E_6	E_7	E_8	E_9
6.0	2.3412(-4)	2.1480(-4)	1.9832(-4)	1.8412(-4)	1.7176(-4)
6.1	2.0979	1.9263	1.7797	1.6532	1.5430
6.2	1.8801	1.7276	1.5972	1.4845	1.3863
6.3	1.6850	1.5495	1.4335	1.3331	1.2455
6.4	1.5103	1.3899	1.2867	1.1973	1.1191
6.5	1.3539	1.2469	1.1550	1.0763	1.0056
6.6	1.2137	1.1186	1.0368	0.9658	0.9037
6.7	1.0882	1.0036	0.9308	0.8675	0.8121
6.8	0.9758	0.9005	0.8357	0.7793	0.7298
6.9	0.8750	0.8081	0.7503	0.7001	0.6559
7.0	0.7847	0.7252	0.6738	0.6289	0.5895
7.1	0.7038	0.6508	0.6050	0.5651	0.5299
7.2	6.3127(-5)	5.8414(-5)	5.4334(-5)	5.0769(-5)	4.7631(-5)
7.3	5.6627	5.2433	4.8797	4.5618	4.2816
7.4	5.0800	4.7067	4.3827	4.0991	3.8490
7.5	4.5576	4.2253	3.9365	3.6835	3.4602
7.6	4.0893	3.7933	3.5360	3.3103	3.1109
7.7	3.6693	3.4058	3.1764	2.9750	2.7969
7.8	3.2927	3.0580	2.8535	2.6738	2.5148
7.9	2.9550	2.7460	2.5636	2.4032	2.2612
8.0	2.6521	2.4659	2.3032	2.1601	2.0332
8.1	2.3804	2.2145	2.0694	1.9416	1.8283
8.2	2.1367	1.9889	1.8595	1.7454	1.6441
8.3	1.9181	1.7863	1.6709	1.5690	1.4786
8.4	1.7219	1.6045	1.5015	1.4106	1.3297
8.5	1.5460	1.4412	1.3494	1.2682	1.1959
8.6	1.3880	1.2947	1.2127	1.1402	1.0756
8.7	1.2463	1.1631	1.0899	1.0252	0.9675
8.8	1.1192	1.0449	0.9796	0.9218	0.8702
8.9	1.0050	0.9388	0.8805	0.8289	0.7827
9.0	0.9026	0.8435	0.7915	0.7453	0.7041
9.1	0.8106	0.7580	0.7115	0.6703	0.6334
9.2	7.2809(-6)	6.8111(-6)	6.3963(-6)	6.0277(-6)	5.6981(-6)
9.3	6.5399	6.1207	5.7503	5.4209	5.1262
9.4	5.8746	5.5006	5.1698	4.8754	4.6119
9.5	5.2773	4.9435	4.6481	4.3850	4.1493
9.6	4.7410	4.4431	4.1792	3.9440	3.7332
9.7	4.2594	3.9935	3.7578	3.5476	3.3590
9.8	3.8269	3.5896	3.3790	3.1911	3.0224
9.9	3.4385	3.2266	3.0385	2.8705	2.7196
10.0	3.0897	2.9005	2.7324	2.5822	2.4472

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	E_{10}	E_{11}	E_{12}	E_{13}	E_{14}
6.0	1.6091(-4)	1.6133(-4)	1.4280(-4)	1.3516(-4)	1.2829(-4)
6.1	1.4463	1.3607	1.2844	1.2161	1.1546
6.2	1.2999	1.2235	1.1553	1.0943	1.0392
6.3	1.1685	1.1002	1.0393	0.9846	0.9354
6.4	1.0503	0.9893	0.9349	0.8860	0.8419
6.5	0.9442	0.8897	0.8410	0.7973	0.7578
6.6	0.8488	0.8001	0.7566	0.7175	0.6822
6.7	0.7631	0.7196	0.6807	0.6457	0.6141
6.8	0.6861	0.6472	0.6124	0.5811	0.5528
6.9	0.6169	0.5821	0.5510	0.5230	0.4976
7.0	0.5547	0.5236	0.4958	0.4707	0.4480
7.1	0.4988	0.4710	0.4461	0.4236	0.4033
7.2	4.4849(-5)	4.2367(-5)	4.0140(-5)	3.8131(-5)	3.6311(-5)
7.3	4.0331	3.8112	3.6120	3.4322	3.2691
7.4	3.6270	3.4286	3.2503	3.0894	2.9434
7.5	3.2618	3.0845	2.9250	2.7809	2.6501
7.6	2.9336	2.7750	2.6323	2.5033	2.3862
7.7	2.6385	2.4966	2.3690	2.2535	2.1485
7.8	2.3732	2.2463	2.1320	2.0286	1.9346
7.9	2.1346	2.0211	1.9189	1.8263	1.7421
8.0	1.9201	1.8186	1.7271	1.6441	1.5687
8.1	1.7272	1.6364	1.5545	1.4802	1.4126
8.2	1.5537	1.4725	1.3992	1.3327	1.2721
8.3	1.3977	1.3251	1.2594	1.1999	1.1456
8.4	1.2574	1.1924	1.1337	1.0803	1.0317
8.5	1.1313	1.0731	1.0205	0.9727	0.9291
8.6	1.0178	0.9657	0.9187	0.8758	0.8368
8.7	0.9157	0.8692	0.8270	0.7886	0.7536
8.8	0.8240	0.7823	0.7445	0.7101	0.6788
8.9	0.7414	0.7041	0.6703	0.6395	0.6114
9.0	0.6671	0.6337	0.6034	0.5758	0.5506
9.1	0.6003	0.5704	0.5433	0.5186	0.4960
9.2	5.4019(-6)	5.1342(-6)	4.8913(-6)	4.6699(-6)	4.4674(-6)
9.3	4.8612	4.6215	4.4040	4.2056	4.0240
9.4	4.3747	4.1602	3.9653	3.7875	3.6247
9.5	3.9371	3.7450	3.5704	3.4111	3.2651
9.6	3.5433	3.3713	3.2149	3.0721	2.9413
9.7	3.1890	3.0350	2.8949	2.7669	2.6496
9.8	2.8702	2.7323	2.6068	2.4921	2.3869
9.9	2.5834	2.4599	2.3474	2.2446	2.1502
10.0	2.3253	2.2147	2.1139	2.0217	1.9371

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	E ₁₅	E ₁₆	E ₁₇	E ₁₈	E ₁₉	E ₂₀
6.0	1.2207(-4)	1.1642(-4)	1.1126(-4)	1.0654(-4)	1.0220(-4)	0.9819(-4)
6.1	1.0990	1.0483	1.0021	0.9598	0.9208	0.8848
6.2	0.9894	0.9440	0.9026	0.8646	0.8297	0.7974
6.3	0.8907	0.8501	0.8130	0.7789	0.7476	0.7186
6.4	0.8019	0.7655	0.7323	0.7017	0.6736	0.6476
6.5	0.7220	0.6894	0.6596	0.6322	0.6070	0.5836
6.6	0.6501	0.6209	0.5941	0.5696	0.5469	0.5260
6.7	0.5853	0.5592	0.5352	0.5131	0.4928	0.4741
6.8	0.5271	0.5036	0.4821	0.4623	0.4441	0.4273
6.9	0.4746	0.4535	0.4343	0.4166	0.4002	0.3851
7.0	0.4273	0.4085	0.3912	0.3753	0.3606	0.3471
7.1	0.3848	0.3679	0.3524	0.3382	0.3250	0.3128
7.2	3.4653(-5)	3.3139(-5)	3.1749(-5)	3.0470(-5)	2.9289(-5)	2.8195(-5)
7.3	3.1207	2.9849	2.8603	2.7455	2.6395	2.5413
7.4	2.8103	2.6886	2.5769	2.4739	2.3788	2.2906
7.5	2.5309	2.4218	2.3216	2.2292	2.1439	2.0647
7.6	2.2793	2.1815	2.0916	2.0088	1.9321	1.8611
7.7	2.0528	1.9651	1.8845	1.8101	1.7414	1.6776
7.8	1.8488	1.7702	1.6979	1.6312	1.5695	1.5122
7.9	1.6651	1.5946	1.5298	1.4699	1.4145	1.3631
8.0	1.4998	1.4365	1.3784	1.3247	1.2749	1.2288
8.1	1.3508	1.2941	1.2420	1.1938	1.1491	1.1077
8.2	1.2167	1.1659	1.1191	1.0758	1.0358	0.9985
8.3	1.0959	1.0504	1.0084	0.9695	0.9336	0.9002
8.4	0.9872	0.9463	0.9086	0.8738	0.8415	0.8115
8.5	0.8892	0.8526	0.8188	0.7875	0.7585	0.7316
8.6	0.8010	0.7681	0.7378	0.7097	0.6837	0.6595
8.7	0.7216	0.6921	0.6649	0.6397	0.6163	0.5946
8.8	0.6500	0.6235	0.5991	0.5765	0.5555	0.5360
8.9	0.5856	0.5618	0.5399	0.5196	0.5008	0.4833
9.0	0.5275	0.5062	0.4866	0.4683	0.4514	0.4357
9.1	0.4752	0.4561	0.4385	0.4221	0.4070	0.3928
9.2	4.2814(-6)	4.1100(-6)	3.9517(-6)	3.8049(-6)	3.6686(-6)	3.5415(-6)
9.3	3.8572	3.7035	3.5614	3.4296	3.3072	3.1930
9.4	3.4751	3.3372	3.2097	3.0914	2.9814	2.8789
9.5	3.1309	3.0072	2.8927	2.7865	2.6878	2.5967
9.6	2.8209	2.7099	2.6071	2.5118	2.4231	2.3404
9.7	2.5416	2.4420	2.3498	2.2642	2.1845	2.1102
9.8	2.2900	2.2006	2.1178	2.0410	1.9694	1.9027
9.9	2.0634	1.9831	1.9088	1.8398	1.7756	1.7156
10.0	1.8592	1.7872	1.7205	1.6585	1.6008	1.5469

Note: The figures in parentheses indicate the power of ten by which the numbers alongside and below in the same column are to be multiplied.

x	$E_2(x) - x \log_e x$	$E_3(x) + \frac{x^2}{2} \log_e \frac{x}{2}$	x	$E_2(x) - x \log_e x$
.00	1.0000000	.5000000	.25	.8643037
.01	0.9957222	.4900463	.26	.8576797
.02	.9913450	.4801859	.27	.8509676
.03	.9868687	.4704197	.28	.8441678
.04	.9822939	.4607488	.29	.8372808
.05	.9776211	.4511742	.30	.8303071
.06	.9728508	.4416967	.31	.8232469
.07	.9679834	.4323175	.32	.8161007
.08	.9630194	.4230374	.33	.8088690
.09	.9579593	.4138574	.34	.8015521
.10	.9528035	.4047785	.35	.7941504
.11	.9475526		.36	.7866644
.12	.9422071		.37	.7790943
.13	.9367672		.38	.7714407
.14	.9312336		.39	.7637039
.15	.9256067		.40	.7558843
.16	.9198870		.41	.7479823
.17	.9140748		.42	.7399982
.18	.9081706		.43	.7319324
.19	.9021750		.44	.7237854
.20	.8960882		.45	.7155575
.21	.8899109		.46	.7072491
.22	.8836433		.47	.6988605
.23	.8772860		.48	.6903921
.24	.8708393		.49	.6818443
			.50	.6732175

/NC:ph
 December 2, 1946,
 Chalk River, Ontario.