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Tables of Transport Integrals $J_n(x) \equiv \int_0^x \frac{e^z z^n dz}{(e^z-1)^2}$

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Tables of Transport Integrals

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William M. Rogers and Robert L. Powell

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Preface

Modern theories of the transport properties of solids have progressed to the point where quantitative comparisons can be made between theory and the results of carefully controlled experiments. Transport integrals of the form tabulated occur quite frequently in the theories, especially for electrical resistance, thermal conductivity, and specific heat.

These tables were prepared by members of the Properties of Materials Section of the Cryogenic Engineering Division, National Bureau of Standards, Boulder, Colo.

A. V. Astin, *Director.*

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Tables of Transport Integrals

$$J_n(x) \equiv \int_0^x \frac{e^z z^n dz}{(e^z-1)^2}$$

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The transport integrals, $J_n(x)$, defined by

$$J_n(x) \equiv \int_0^x \frac{e^z z^n dz}{(e^z-1)^2},$$

are utilized often in the development of theories describing the thermal conductivity, electrical conductivity, thermal electromotive force, specific heat, and other similar transport properties of solids. The tables include values to six significant figures of the integral for the index integer n ranging from 2 through 17, and for the limit of integration x ranging from 0.1, by 0.1 intervals, to the limiting upper value, that ranges from 25 for $n=2$ to 40 for $n=17$. The three series utilized to represent the integral in different ranges are derived. The limiting values in the upper range and the asymptotic series expansions in the lower range are also given. Auxiliary tables include the values of the Riemann Zeta numbers and Bernoulli numbers utilized in the calculations.

1. Introduction

1.1. Mathematical Formulation

Integrals of the type

$$J_n(x) \equiv \int_0^x \frac{e^z z^n dz}{(e^z-1)^2}; \quad n=2, 3, \ldots, 17 \tag{1}$$

occur frequently in the theories of transport properties of solids, particularly for electrical conductivity, thermal conductivity, and specific heat [1, 2, 3, 4, 5].[1] The limit of integration, x, represents Θ/T, a characteristic temperature of a solid divided by the absolute temperature. The characteristic temperature for a solid is a varying "constant" that depends upon the actual chemical and physical composition of the material, the temperature range, and the actual physical property being investigated. Blackman [4] has discussed several of the various possible characteristic temperatures.

In the theories on electrical transport properties developed by Bloch [6] and Grüneisen [7] the electrical resistivity, ρ, at low temperatures is given by the equation

$$\rho = 4 \frac{\rho_a}{T_a} \frac{T^5}{\Theta_R^4} J_5(\Theta/T), \tag{2}$$

where Θ_R is the electrical resistivity characteristic temperature, T_a is some temperature equal to or greater than the Θ_R and ρ_a is the resistivity at the temperature T_a. The electrical-resistivity characteristic temperatures for different metals vary from about 75° K to 400° K. Grüneisen [7] calculated and tabulated values of $4\ J_5(x)/x^4$ for about 180 values of x ranging from 0 up to 80. Sondheimer [8] also calculated and tabulated values of $J_5(x)$ for 14 values of x ranging from 0.8 to 20. Comparisons between the experimental values for the electrical resistivity of various metals and the predicted values given by eq (2) have been given by many authors, including Grüneisen [7] and MacDonald [2]. In general, eq (2) fits the experimental data very well.

[1] Figures in brackets indicate the literature references on page 6 of this Circular.

The theories on thermal conductivity and thermoelectric force developed by Wilson [1], Sondheimer [8], Klemens [3], Ziman [9], and others incorporate various transport integrals of different order, n. The derived equations are more complex than those for electrical resistivity, and are unfortunately much less accurate in predicting the temperature dependence of the properties [3]. MacDonald, et al., [10] have used the $J_3(x)$ integral to empirically fit thermal-conductivity data. Ziman [9] and MacDonald [11] have calculated and tabulated values for the transport integrals for about 15 values of the variable x for $n=6$, 8, 10, 12 and 2, 3, 4, 6, respectively.

The theory on specific heats developed by Debye [12] resulted in equations that fit experimental measurements moderately well. The specific heat at constant volume can be expressed as

$$C_v=\frac{9R}{x^3}\int_0^x \frac{z^4e^z dz}{(e^z-1)^2}\equiv\frac{9R}{x^3}J_4(x); \quad x\equiv\Theta_D/T, \tag{3}$$

where R is a constant, and Θ_D is the Debye or specific-heat characteristic temperature for the material. The characteristic temperatures for specific heat, Θ_D, and electrical resistance, Θ_R, in a given metal are approximately the same. Blackman [4] gives an extensive comparison of the theory with the experimental results. Detailed tables of the specific-heat function have been published by Beattie [13] and Simon [14].

In order to numerically evaluate the transport integrals, $J_n(x)$, for n equal to 2 or greater, three different series representations for the integrals were used, one each for the large, intermediate, and small values of the variable x. The three series representation solutions will be discussed separately. However, the initial integral can be simplified first by an integration by parts valid for all utilized ranges of values of x and n.

$$J_n(x)\equiv\int_0^x \frac{e^z z^n dz}{(e^z-1)^2}=-\frac{x^n}{e^x-1}+n\int_0^x \frac{z^{n-1}dz}{e^z-1}. \tag{4}$$

(a) *Large Values of* x [1]. The second term on the right of the above expansion can be further separated. Since the integrand function is continuous and also finite for both the upper and lower limits of z and for z increasing without limit.

$$\int_0^x \frac{z^{n-1}dz}{e^z-1}=\int_0^\infty \frac{z^{n-1}dz}{e^z-1}-\int_x^\infty \frac{z^{n-1}dz}{e^z-1}. \tag{5}$$

For both terms on the right, the denominator can be expanded in a series representation, and the order of summation and integration interchanged. Thus

$$\int_0^x \frac{z^{n-1}dz}{e^z-1}=\sum_{s=1}^\infty\int_0^\infty z^{n-1}e^{-sz}dz-\sum_{s=1}^\infty\int_x^\infty z^{n-1}e^{-sz}dz.$$

By repeated integration by parts

$$\int_0^\infty z^{n-1}e^{-sz}dz=\frac{(n-1)!}{s^n}$$

and

$$\int_x^\infty z^{n-1}e^{-sz}dz=\frac{(n-1)!e^{-sx}}{s^n}\left(1+sx+\ \ldots\ +\frac{(sx)^{n-1}}{(n-1)!}\right).$$

Thus for large values of x, a convenient series for computation is

$$J_n(x)=\frac{-x^n}{e^x-1}+n!\sum_{s=1}^\infty\frac{1}{s^n}-n!\sum_{s=1}^\infty\frac{e^{-sx}}{s^n}\left(1+sx+\ \ldots\ +\frac{(sx)^{n-1}}{(n-1)!}\right). \tag{6}$$

Since

$$\sum_{s=1}^{\infty}\frac{1}{s^n}\equiv\zeta(n), \tag{7}$$

the series can be rewritten

$$J_n(x)=\frac{-x^n}{e^x-1}+n!\zeta(n)-n!\sum_{s=1}^{\infty}\frac{e^{-sx}}{s^n}\left(1+sx+\ldots+\frac{(sx)^{n-1}}{(n-1)!}\right). \tag{8}$$

This series was used for calculating $J_n(x)$ for the majority of the tabulated values. This series converges very slowly for values of n greater than about 7, where x is less than 10, and is even impractical for use with high-speed digital computers. Table 1 gives the actual series expansion utilized for the different ranges of values of x for each integral.

(b) *Intermediate Values of x.* For values of n greater than 7 and where x is less than 10, the second and third terms of eq. (6) are very much larger than the first term and are approximately equal to each other. This results in both a very slow convergence and in a great loss of accuracy. The second and third terms can be combined, and the various factors collected:

$$\begin{aligned}
J_n(x)&=\frac{-x^n}{e^x-1}+n!\sum_{s=1}^{\infty}\frac{1}{s^n}\left\{1-\frac{1}{e^{sx}}\left[\frac{1}{1}+\frac{(sx)^1}{1!}+\ldots+\frac{(sx)^{n-1}}{(n-1)!}\right]\right\}\\
&=\frac{-x^n}{e^x-1}+n!\sum_{s=1}^{\infty}\frac{1}{e^{sx}s^n}\left\{\frac{(sx)^n}{n!}+\frac{(sx)^{n+1}}{(n+1)!}+\frac{(sx)^{n+2}}{(n+2)!}+\ldots+\frac{(sx)^{n+t}}{(n+t)!}+\ldots\right\}\\
&=\frac{-x^n}{e^x-1}+\sum_{s=1}^{\infty}\frac{x^n}{e^{sx}}\left\{1+\frac{(sx)^1}{(n+1)}+\frac{(sx)^2}{(n+1)(n+2)}+\ldots+\frac{(sx)^t}{(n+1)(n+2)\ldots(n+t)}+\ldots\right\}\\
&=\frac{-x^n}{e^x-1}+x^n\sum_{s=1}^{\infty}e^{\frac{1}{sx}}\left\{1+\frac{sx}{n+1}+\frac{(sx)^2}{(n+1)(n+2)}+\ldots+\frac{(sx)^t}{(n+1)(n+2)\ldots(n+t)}+\ldots\right\}.
\end{aligned} \tag{9}$$

This series is used to calculate the values for $J_n(x)$ for intermediate values of x where n was greater than 7. The actual ranges where this series is utilized are also included in table 1.

(c) *Small Values of x* [1]. The Bernoulli expansion can be utilized for small values of x.

$$\frac{z}{e^z-1}=1-\frac{z}{2}+\sum_{s=1}^{\infty}(-1)^{s+1}\frac{B_s}{(2s)!}z^{2s};\quad z<2\pi, \tag{10}$$

where B_s are the Bernoulli numbers, and the series is convergent for the indicated range of z. The second term on the right of eq (4) can be expanded in terms of the Bernoulli numbers,

$$\int_0^x\frac{z^{n-1}}{e^z-1}dz=\int_0^x z^{n-2}\left\{1-\frac{z}{2}+\sum_{s=1}^{\infty}(-1)^{s+1}\frac{B_s}{(2s)!}z^{2s}\right\}dz=\frac{x^{n-1}}{n-1}-\frac{x^n}{2n}+\sum_{s=1}^{\infty}(-1)^{s+1}\frac{B_sx^{2s+n-1}}{(2s)!(n+2s-1)}.$$

The first term of the same eq (4) can be expanded also,

$$\frac{x^n}{e^x-1}=x^{n-1}\left\{1-\frac{x}{2}+\sum_{s=1}^{\infty}(-1)^{s-1}\frac{B_sx^{2s}}{(2s)!}\right\}.$$

Combining the two terms, one obtains

$$J_n(x)=x^{n-1}\left\{\frac{1}{n-1}-\sum_{s=1}^{\infty}(-1)^{s-1}\frac{B_s(2s-1)x^{2s}}{(2s)!(n+2s-1)}\right\}. \tag{11}$$

This series expansion is utilized for evaluating $J_n(x)$ for low values of x for all n. Above about $x=1$, the series converges very slowly. The ranges of x where this series is utilized are given in table 1.

TABLE 1. *Ranges of values of x for each type of series expansion*

n	Range of x values for series of type—		
	a	*b*	*c*
2	0.1 to 1.0		1.1 to 25.0.
3	.1 to 1.5		1.6 to 25.0.
4, 5	.1 to 3.8		3.9 to 25.0.
6	.1 to 3.8		3.9 to 30.0.
7	.1 to 3.6		3.7 to 30.0.
8, 9	.1 to 3.6	3.7 to 6.0	6.1 to 35.0.
10, 11	.1 to 3.6	3.7 to 7.0	7.1 to 35.0.
12 to 16	.1 to 3.6	3.7 to 10.0	10.1 to 40.0.
17	.1 to 4.4	4.5 to 10.0	10.1 to 40.0.

Limiting and asymptotic values for the transport integrals may be obtained simply. From (8) for the series *a* expansions, the limiting value for $J_n(x)$ as x increases without limit is

$$\lim_{x\to\infty} J_n(x)=n!\zeta(n). \tag{12}$$

The limiting values for each $J_n(x)$ are given in table 9. From eq (11) for the series *c* expansions, the limiting asymptotic value for $J_n(x)$ as x approaches zero is

$$\lim_{x\to 0} J_n(x)=\frac{x^{n-1}}{n-1}. \tag{13}$$

The limiting values for large x and the limiting asymptotic polynomial range for small x are shown clearly in figures 1, 2, and 3 for $J_2(x)$ through $J_7(x)$.

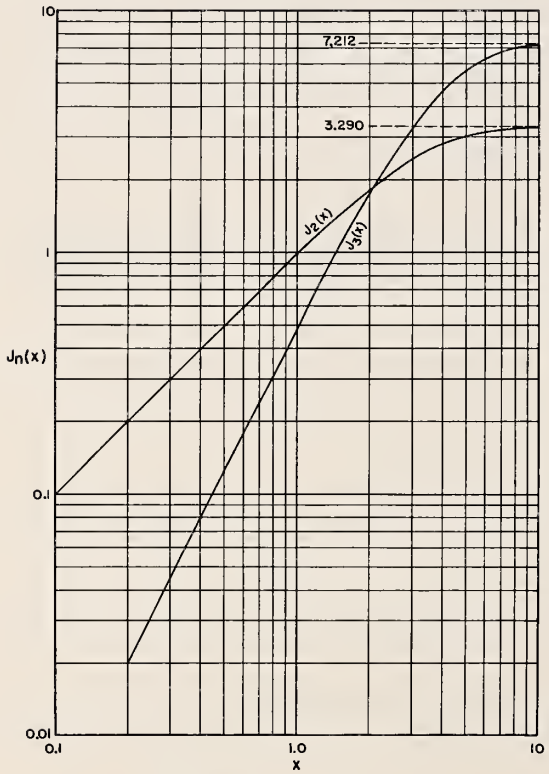

FIGURE 1. $J_2(x)$ and $J_3(x)$.

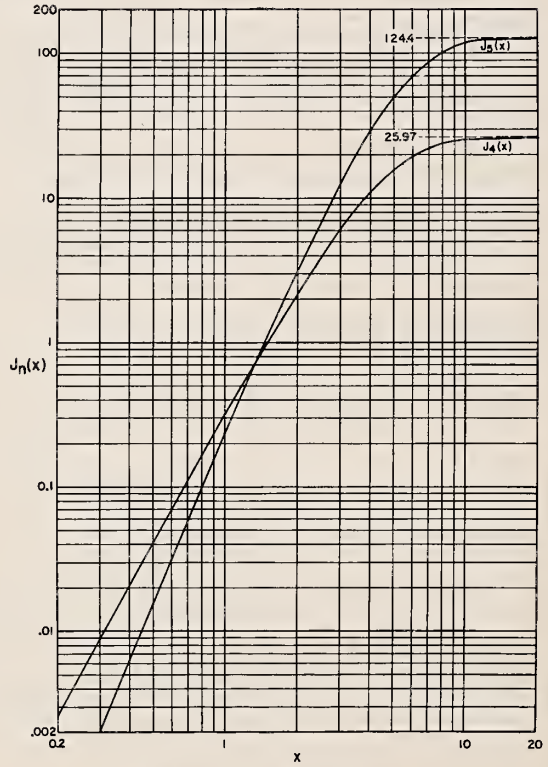

FIGURE 2. $J_4(x)$ and $J_5(x)$.

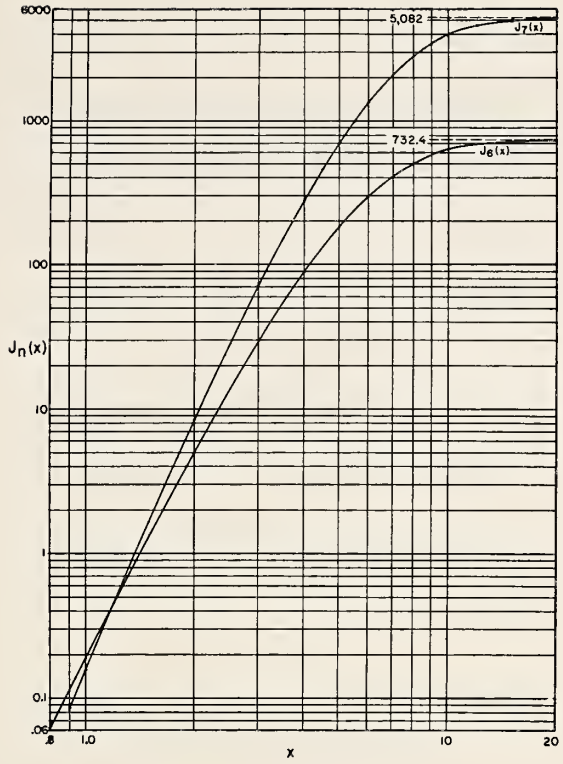

FIGURE 3. $J_6(x)$ and $J_7(x)$.

1.2. Accuracy and Interpolation

The computations for these tables were performed on an IBM electronic digital computer No. 650. The various arithmetic operations were programmed in a floating decimal point routine. This permitted no more than eight significant figures to be used during the operations. Each of the three series expansions contain the differences of several terms, and in some ranges of the variable x the two terms are approximately equal. This results in an immediate loss of accuracy. The problem is especially troublesome for series expansion type a where n is large. However, the difficulty is largely avoided in these tables by using each series only in the ranges where it is rapidly convergent. All values of the integral were calculated to eight significant figures and tabulated this way on preliminary sheets. The values were rounded to six places for the final tabulation.

Estimates of the accuracy are obtained by comparing values for the same x calculated by different series expansions. The table is believed to be accurate to within one in the sixth significant figure for all values of $J_2(x)$ to $J_7(x)$, for all values for higher $J_n(x)$ computed by series c, for many of the values calculated by series b, and for the higher values (above about $x=15$) calculated by series a. It is believed to be accurate to within two in the sixth significant figure for most of the higher values calculated by series b and the lower values calculated by series a. For $J_{12}(x)$ to $J_{17}(x)$ the values in the range from $x=9$ to 11 may be error by as much as five in the sixth significant figure.

For $J_2(x)$ to $J_7(x)$, series a was calculated for values of x down to 0.1, and series c was calculated for values of x up to about 3.8. The best agreement at the selected transition between different series is for $J_2(x)$, where there is no difference in the eighth significant figure; the worst is for $J_7(x)$, where there is a difference of four in the seventh significant figure.

For $J_8(x)$ and above, series b was calculated from about $x=3$ to 10. The disagreement with series c at the lower values of x is at worst two in the seventh significant figure for $J_{12}(x)$ and at best two in the eighth significant figure for $J_{10}(x)$. For $J_8(x)$ to $J_{11}(x)$, the agreement of

series b with series a values is within about three in the seventh significant figure. For $J_{12}(x)$ to $J_{17}(x)$, there is a discrepancy of up to four in the sixth significant figure between the series a and b values for the range from $x=9$ to 10.

Interpolation may be performed on most of the values tabulated. Interpolated values will have approximately twice the inaccuracy of the basic tabulated values if they are obtained by using Lagrangian interpolation coefficients of the order indicated in table 2. Interpolation will not be reliable for low ranges of x, where the value of $J_n(x)$ changes order in less than about five successive tabulated values.

TABLE 2. *Interpolation regions for the variable x*

n	2 pt	3 pt	4 pt	5 pt	6 pt	n	2 pt	3 pt	4 pt	5 pt	6 pt
2	10 to 25	2 to 10	0 to 2			10	21 to 35	10 to 21	6 to 10	4 to 6	0 to 4
3	13 to 25	8 to 13	2 to 8	0 to 2		11	23 to 35	10 to 23	6 to 10	4 to 6	0 to 4
4	14 to 25	5 to 14	3 to 8	2 to 3	0 to 2	12	24 to 40	10 to 24	6 to 10	4 to 6	0 to 4
5	14 to 25	7 to 14	3 to 7	2 to 3	0 to 2	13	26 to 40	13 to 26	7 to 13	5 to 7	0 to 5
6	17 to 30	8 to 17	5 to 8	3 to 5	0 to 3	14	28 to 40	14 to 28	8 to 14	5 to 8	0 to 5
7	18 to 30	9 to 18	6 to 9	4 to 6	0 to 4	15	28 to 40	17 to 28	8 to 17	6 to 8	0 to 6
8	19 to 35	9 to 19	6 to 9	4 to 6	0 to 4	16	28 to 40	17 to 28	9 to 17	7 to 9	0 to 7
9	20 to 35	10 to 20	6 to 10	4 to 6	0 to 4	17	30 to 40	16 to 30	9 to 16	7 to 9	0 to 7

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3. Tables of the Transport Integrals

Tables 3 to 5 contain values of $J_n(x)$ and $J_n(x)/x^{n-1}$ for n from 2 to 7. Tables 6 to 8 contain values of $J_n(x)$ for n from 8 to 17. Tables 9 and 10 contain auxiliary numbers utilized in the computations. Most of the values are given in scientific notation, the numbers under the column "Exp." indicate the power of 10 by which the "Coef." is multiplied.

TABLE 3.

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; $n = 2, 3$

x	1/x	$J_2(x)$		$J_2(x)/x$		$J_3(x)$		$J_3(x)/x^2$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
.1	10.0000	9.99722	- 2	9.99722	-1	4.99792	- 3	4.99792	-1
.2	5.0000	1.99778	- 1	9.98890	-1	1.99667	- 2	4.99168	-1
.3	3.3333	2.99252	- 1	9.97507	-1	4.48318	- 2	4.98131	-1
.4	2.5000	3.98231	- 1	9.95577	-1	7.94695	- 2	4.96684	-1
.5	2.0000	4.96554	- 1	9.93107	-1	1.23709	- 1	4.94835	-1
.6	1.6667	5.94064	- 1	9.90107	-1	1.77332	- 1	4.92589	-1
.7	1.4286	6.90610	- 1	9.86586	-1	2.40078	- 1	4.89956	-1
.8	1.2500	7.86046	- 1	9.82558	-1	3.11645	- 1	4.86946	-1
.9	1.1111	8.80231	- 1	9.78035	-1	3.91692	- 1	4.83570	-1
1.0	1.0000	9.73033	- 1	9.73033	-1	4.79841	- 1	4.79841	-1
1.1	.9091	1.06433	0	9.67569	-1	5.75685	- 1	4.75773	-1
1.2	.8333	1.15399	0	9.61660	-1	6.78788	- 1	4.71381	-1
1.3	.7692	1.24192	0	9.55327	-1	7.88689	- 1	4.66680	-1
1.4	.7143	1.32802	0	9.48588	-1	9.04906	- 1	4.61687	-1
1.5	.6667	1.41220	0	9.41465	-1	1.02694	0	4.56419	-1
1.6	.6250	1.49437	0	9.33980	-1	1.15429	0	4.50894	-1
1.7	.5882	1.57446	0	9.26154	-1	1.28643	0	4.45130	-1
1.8	.5556	1.65242	0	9.18010	-1	1.42283	0	4.39146	-1
1.9	.5263	1.72818	0	9.09571	-1	1.56298	0	4.32959	-1
2.0	.5000	1.80172	0	9.00859	-1	1.70635	0	4.26589	-1
2.1	.4762	1.87299	0	8.91899	-1	1.85244	0	4.20053	-1
2.2	.4545	1.94197	0	8.82711	-1	2.00072	0	4.13372	-1
2.3	.4348	2.00864	0	8.73320	-1	2.15071	0	4.06562	-1
2.4	.4167	2.07299	0	8.63748	-1	2.30193	0	3.99641	-1
2.5	.4000	2.13504	0	8.54015	-1	2.45392	0	3.92627	-1
2.6	.3846	2.19478	0	8.44145	-1	2.60623	0	3.85538	-1
2.7	.3704	2.25222	0	8.34156	-1	2.75845	0	3.78388	-1
2.8	.3571	2.30740	0	8.24071	-1	2.91016	0	3.71194	-1
2.9	.3448	2.36033	0	8.13907	-1	3.06100	0	3.63971	-1
3.0	.3333	2.41105	0	8.03683	-1	3.21060	0	3.56734	-1
3.1	.3226	2.45960	0	7.93418	-1	3.35865	0	3.49496	-1
3.2	.3125	2.50601	0	7.83129	-1	3.50484	0	3.42270	-1
3.3	.3030	2.55034	0	7.72830	-1	3.64889	0	3.35068	-1
3.4	.2941	2.59263	0	7.62538	-1	3.79055	0	3.27902	-1
3.5	.2857	2.63294	0	7.52267	-1	3.92959	0	3.20783	-1
3.6	.2778	2.67131	0	7.42031	-1	4.06580	0	3.13719	-1
3.7	.2703	2.70781	0	7.31841	-1	4.19902	0	3.06722	-1
3.8	.2632	2.74250	0	7.21710	-1	4.32908	0	2.99798	-1
3.9	.2564	2.77543	0	7.11649	-1	4.45585	0	2.92955	-1
4.0	.2500	2.80667	0	7.01667	-1	4.57922	0	2.86201	-1
4.1	.2439	2.83627	0	6.91773	-1	4.69909	0	2.79541	-1
4.2	.2381	2.86430	0	6.81976	-1	4.81540	0	2.72982	-1
4.3	.2326	2.89082	0	6.72283	-1	4.92809	0	2.66527	-1
4.4	.2273	2.91588	0	6.62701	-1	5.03713	0	2.60182	-1
4.5	.2222	2.93956	0	6.53236	-1	5.14249	0	2.53950	-1
4.6	.2174	2.96191	0	6.43894	-1	5.24416	0	2.47834	-1
4.7	.2128	2.98299	0	6.34679	-1	5.34217	0	2.41836	-1
4.8	.2083	3.00286	0	6.25595	-1	5.43652	0	2.35960	-1
4.9	.2041	3.02156	0	6.16646	-1	5.52724	0	2.30206	-1
5.0	.2000	3.03917	0	6.07834	-1	5.61439	0	2.24575	-1

TABLE 3.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 2, 3 (con't.)

x	1/x	$J_2(x)$		$J_2(x)/x$		$J_3(x)$		$J_3(x)/x^2$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
5.1	.1961	3.05573	0	5.99163	-1	5.69800	0	2.19070	-1
5.2	.1923	3.07129	0	5.90633	-1	5.77815	0	2.13689	-1
5.3	.1887	3.08591	0	5.82248	-1	5.85489	0	2.08433	-1
5.4	.1852	3.09963	0	5.74006	-1	5.92829	0	2.03302	-1
5.5	.1818	3.11251	0	5.65910	-1	5.99845	0	1.98296	-1
5.6	.1786	3.12458	0	5.57960	-1	6.06543	0	1.93413	-1
5.7	.1754	3.13589	0	5.50156	-1	6.12932	0	1.88653	-1
5.8	.1724	3.14648	0	5.42496	-1	6.19022	0	1.84014	-1
5.9	.1695	3.15639	0	5.34982	-1	6.24821	0	1.79495	-1
6.0	.1667	3.16567	0	5.27611	-1	6.30340	0	1.75094	-1
6.1	.1639	3.17434	0	5.20384	-1	6.35586	0	1.70811	-1
6.2	.1613	3.18245	0	5.13298	-1	6.40570	0	1.66642	-1
6.3	.1587	3.19002	0	5.06352	-1	6.45302	0	1.62586	-1
6.4	.1563	3.19709	0	4.99545	-1	6.49791	0	1.58640	-1
6.5	.1538	3.20368	0	4.92875	-1	6.54045	0	1.54804	-1
6.6	.1515	3.20984	0	4.86339	-1	6.58076	0	1.51074	-1
6.7	.1493	3.21558	0	4.79937	-1	6.61892	0	1.47448	-1
6.8	.1471	3.22093	0	4.73666	-1	6.65502	0	1.43923	-1
6.9	.1449	3.22591	0	4.67523	-1	6.68915	0	1.40499	-1
7.0	.1429	3.23055	0	4.61507	-1	6.72139	0	1.37171	-1
7.1	.1408	3.23487	0	4.55615	-1	6.75184	0	1.33939	-1
7.2	.1389	3.23889	0	4.49846	-1	6.78058	0	1.30798	-1
7.3	.1370	3.24263	0	4.44195	-1	6.80769	0	1.27748	-1
7.4	.1351	3.24610	0	4.38663	-1	6.83324	0	1.24785	-1
7.5	.1333	3.24934	0	4.33245	-1	6.85731	0	1.21908	-1
7.6	.1316	3.25234	0	4.27939	-1	6.87998	0	1.19113	-1
7.7	.1299	3.25513	0	4.22744	-1	6.90131	0	1.16399	-1
7.8	.1282	3.25772	0	4.17656	-1	6.92138	0	1.13764	-1
7.9	.1266	3.26012	0	4.12674	-1	6.94026	0	1.11204	-1
8.0	.1250	3.26235	0	4.07794	-1	6.95799	0	1.08719	-1
8.1	.1235	3.26442	0	4.03015	-1	6.97465	0	1.06305	-1
8.2	.1220	3.26634	0	3.98334	-1	6.99029	0	1.03960	-1
8.3	.1205	3.26812	0	3.93749	-1	7.00497	0	1.01683	-1
8.4	.1190	3.26977	0	3.89258	-1	7.01874	0	9.94720	-2
8.5	.1176	3.27130	0	3.84859	-1	7.03166	0	9.73240	-2
8.6	.1163	3.27271	0	3.80548	-1	7.04376	0	9.52374	-2
8.7	.1149	3.27403	0	3.76325	-1	7.05510	0	9.32105	-2
8.8	.1136	3.27524	0	3.72186	-1	7.06572	0	9.12412	-2
8.9	.1124	3.27636	0	3.68131	-1	7.07566	0	8.93279	-2
9.0	.1111	3.27740	0	3.64156	-1	7.08497	0	8.74688	-2
9.1	.1099	3.27836	0	3.60260	-1	7.09367	0	8.56620	-2
9.2	.1087	3.27925	0	3.56441	-1	7.10181	0	8.39061	-2
9.3	.1075	3.28008	0	3.52696	-1	7.10942	0	8.21994	-2
9.4	.1064	3.28084	0	3.49025	-1	7.11653	0	8.05402	-2
9.5	.1053	3.28154	0	3.45425	-1	7.12318	0	7.89272	-2
9.6	.1042	3.28219	0	3.41895	-1	7.12938	0	7.73587	-2
9.7	.1031	3.28279	0	3.38432	-1	7.13517	0	7.58335	-2
9.8	.1020	3.28334	0	3.35035	-1	7.14058	0	7.43500	-2
9.9	.1010	3.28386	0	3.31703	-1	7.14562	0	7.29070	-2
10.0	.1000	3.28433	0	3.28433	-1	7.15032	0	7.15032	-2

TABLE 3.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 2, 3 (con't.)

x	1/x	$J_2(x)$		$J_2(x)/x$		$J_3(x)$		$J_3(x)/x^2$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
10.1	.0990	3.28477	0	3.25224	-1	7.15471	0	7.01373	-2
10.2	.0980	3.28517	0	3.22075	-1	7.15879	0	6.88081	-2
10.3	.0971	3.28554	0	3.18984	-1	7.16260	0	6.75144	-2
10.4	.0962	3.28588	0	3.15950	-1	7.16615	0	6.62551	-2
10.5	.0952	3.28620	0	3.12971	-1	7.16946	0	6.50291	-2
10.6	.0943	3.28649	0	3.10046	-1	7.17253	0	6.38353	-2
10.7	.0935	3.28676	0	3.07174	-1	7.17540	0	6.26727	-2
10.8	.0926	3.28701	0	3.04353	-1	7.17806	0	6.15403	-2
10.9	.0917	3.28724	0	3.01581	-1	7.18054	0	6.04372	-2
11.0	.0909	3.28745	0	2.98859	-1	7.18285	0	5.93624	-2
11.1	.0901	3.28764	0	2.96184	-1	7.18499	0	5.83150	-2
11.2	.0893	3.28782	0	2.93555	-1	7.18698	0	5.72942	-2
11.3	.0885	3.28798	0	2.90972	-1	7.18884	0	5.62991	-2
11.4	.0877	3.28814	0	2.88433	-1	7.19056	0	5.53290	-2
11.5	.0870	3.28828	0	2.85937	-1	7.19216	0	5.43830	-2
11.6	.0862	3.28840	0	2.83483	-1	7.19364	0	5.34605	-2
11.7	.0855	3.28852	0	2.81070	-1	7.19502	0	5.25606	-2
11.8	.0847	3.28863	0	2.78698	-1	7.19630	0	5.16827	-2
11.9	.0840	3.28873	0	2.76364	-1	7.19749	0	5.08261	-2
12.0	.0833	3.28882	0	2.74069	-1	7.19859	0	4.99902	-2
12.1	.0826	3.28891	0	2.71811	-1	7.19961	0	4.91743	-2
12.2	.0820	3.28899	0	2.69589	-1	7.20056	0	4.83779	-2
12.3	.0813	3.28906	0	2.67403	-1	7.20144	0	4.76003	-2
12.4	.0806	3.28912	0	2.65252	-1	7.20226	0	4.68409	-2
12.5	.0800	3.28919	0	2.63135	-1	7.20301	0	4.60993	-2
12.6	.0794	3.28924	0	2.61051	-1	7.20371	0	4.53749	-2
12.7	.0787	3.28929	0	2.58999	-1	7.20436	0	4.46671	-2
12.8	.0781	3.28934	0	2.56980	-1	7.20497	0	4.39756	-2
12.9	.0775	3.28938	0	2.54991	-1	7.20552	0	4.32998	-2
13.0	.0769	3.28942	0	2.53033	-1	7.20604	0	4.26393	-2
13.1	.0763	3.28946	0	2.51104	-1	7.20652	0	4.19936	-2
13.2	.0758	3.28949	0	2.49204	-1	7.20696	0	4.13623	-2
13.3	.0752	3.28952	0	2.47333	-1	7.20737	0	4.07449	-2
13.4	.0746	3.28955	0	2.45489	-1	7.20775	0	4.01412	-2
13.5	.0741	3.28958	0	2.43672	-1	7.20810	0	3.95506	-2
13.6	.0735	3.28960	0	2.41883	-1	7.20842	0	3.89729	-2
13.7	.0730	3.28962	0	2.40119	-1	7.20872	0	3.84076	-2
13.8	.0725	3.28964	0	2.38380	-1	7.20900	0	3.78545	-2
13.9	.0719	3.28966	0	2.36666	-1	7.20926	0	3.73131	-2
14.0	.0714	3.28968	0	2.34977	-1	7.20950	0	3.67831	-2
14.1	.0709	3.28970	0	2.33312	-1	7.20972	0	3.62644	-2
14.2	.0704	3.28971	0	2.31670	-1	7.20992	0	3.57564	-2
14.3	.0699	3.28972	0	2.30051	-1	7.21011	0	3.52590	-2
14.4	.0694	3.28974	0	2.28454	-1	7.21028	0	3.47718	-2
14.5	.0690	3.28975	0	2.26879	-1	7.21044	0	3.42946	-2
14.6	.0685	3.28976	0	2.25326	-1	7.21059	0	3.38271	-2
14.7	.0680	3.28977	0	2.23794	-1	7.21072	0	3.33691	-2
14.8	.0676	3.28977	0	2.22282	-1	7.21085	0	3.29202	-2
14.9	.0671	3.28978	0	2.20791	-1	7.21097	0	3.24804	-2
15.0	.0667	3.28979	0	2.19319	-1	7.21107	0	3.20492	-2

TABLE 3.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 2, 3 (con't.)

x	1/x	$J_2(x)$		$J_2(x)/x$		$J_3(x)$		$J_3(x)/x^2$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
15.1	.0662	3.28980	0	2.17867	-1	7.21117	0	3.16266	-2
15.2	.0658	3.28980	0	2.16434	-1	7.21126	0	3.12122	-2
15.3	.0654	3.28981	0	2.15020	-1	7.21135	0	3.08059	-2
15.4	.0649	3.28981	0	2.13624	-1	7.21143	0	3.04074	-2
15.5	.0645	3.28982	0	2.12246	-1	7.21150	0	3.00166	-2
15.6	.0641	3.28982	0	2.10886	-1	7.21156	0	2.96333	-2
15.7	.0637	3.28983	0	2.09543	-1	7.21163	0	2.92573	-2
15.8	.0633	3.28983	0	2.08217	-1	7.21168	0	2.88883	-2
15.9	.0629	3.28983	0	2.06908	-1	7.21173	0	2.85263	-2
16.0	.0625	3.28984	0	2.05615	-1	7.21178	0	2.81710	-2
16.1	.0621	3.28984	0	2.04338	-1	7.21183	0	2.78223	-2
16.2	.0617	3.28984	0	2.03077	-1	7.21187	0	2.74801	-2
16.3	.0613	3.28984	0	2.01831	-1	7.21191	0	2.71441	-2
16.4	.0610	3.28985	0	2.00600	-1	7.21194	0	2.68142	-2
16.5	.0606	3.28985	0	1.99385	-1	7.21197	0	2.64903	-2
16.6	.0602	3.28985	0	1.98184	-1	7.21200	0	2.61722	-2
16.7	.0599	3.28985	0	1.96997	-1	7.21203	0	2.58598	-2
16.8	.0595	3.28985	0	1.95825	-1	7.21205	0	2.55529	-2
16.9	.0592	3.28985	0	1.94666	-1	7.21208	0	2.52515	-2
17.0	.0588	3.28985	0	1.93521	-1	7.21210	0	2.49554	-2
17.1	.0585	3.28986	0	1.92389	-1	7.21212	0	2.46644	-2
17.2	.0581	3.28986	0	1.91271	-1	7.21214	0	2.43785	-2
17.3	.0578	3.28986	0	1.90165	-1	7.21215	0	2.40975	-2
17.4	.0575	3.28986	0	1.89072	-1	7.21217	0	2.38214	-2
17.5	.0571	3.28986	0	1.87992	-1	7.21218	0	2.35500	-2
17.6	.0568	3.28986	0	1.86924	-1	7.21219	0	2.32832	-2
17.7	.0565	3.28986	0	1.85868	-1	7.21221	0	2.30209	-2
17.8	.0562	3.28986	0	1.84824	-1	7.21222	0	2.27630	-2
17.9	.0559	3.28986	0	1.83791	-1	7.21223	0	2.25094	-2
18.0	.0556	3.28986	0	1.82770	-1	7.21224	0	2.22600	-2
18.1	.0552	3.28986	0	1.81760	-1	7.21224	0	2.20147	-2
18.2	.0549	3.28986	0	1.80762	-1	7.21225	0	2.17735	-2
18.3	.0546	3.28986	0	1.79774	-1	7.21226	0	2.15362	-2
18.4	.0543	3.28986	0	1.78797	-1	7.21227	0	2.13028	-2
18.5	.0541	3.28986	0	1.77831	-1	7.21227	0	2.10731	-2
18.6	.0538	3.28987	0	1.76874	-1	7.21228	0	2.08471	-2
18.7	.0535	3.28987	0	1.75929	-1	7.21228	0	2.06248	-2
18.8	.0532	3.28987	0	1.74993	-1	7.21229	0	2.04060	-2
18.9	.0529	3.28987	0	1.74067	-1	7.21229	0	2.01906	-2
19.0	.0526	3.28987	0	1.73151	-1	7.21230	0	1.99787	-2
19.1	.0524	3.28987	0	1.72244	-1	7.21230	0	1.97700	-2
19.2	.0521	3.28987	0	1.71347	-1	7.21230	0	1.95646	-2
19.3	.0518	3.28987	0	1.70459	-1	7.21231	0	1.93624	-2
19.4	.0515	3.28987	0	1.69581	-1	7.21231	0	1.91633	-2
19.5	.0513	3.28987	0	1.68711	-1	7.21231	0	1.89673	-2
19.6	.0510	3.28987	0	1.67850	-1	7.21231	0	1.87742	-2
19.7	.0508	3.28987	0	1.66998	-1	7.21232	0	1.85841	-2
19.8	.0505	3.28987	0	1.66155	-1	7.21232	0	1.83969	-2
19.9	.0503	3.28987	0	1.65320	-1	7.21232	0	1.82125	-2
20.0	.0500	3.28987	0	1.64493	-1	7.21232	0	1.80308	-2

TABLE 3.—Continued

TRANSPORT INTEGRALS: $J_n(x) = \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 2, 3 (con't.)

x	1/x	$J_2(x)$		$J_2(x)/x$		$J_3(x)$		$J_3(x)/x^2$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
20.1	.0498	3.28987	0	1.63675	-1	7.21232	0	1.78518	-2
20.2	.0495	3.28987	0	1.62865	-1	7.21233	0	1.76755	-2
20.3	.0493	3.28987	0	1.62062	-1	7.21233	0	1.75018	-2
20.4	.0490	3.28987	0	1.61268	-1	7.21233	0	1.73307	-2
20.5	.0488	3.28987	0	1.60481	-1	7.21233	0	1.71620	-2
20.6	.0485	3.28987	0	1.59702	-1	7.21233	0	1.69958	-2
20.7	.0483	3.28987	0	1.58931	-1	7.21233	0	1.68320	-2
20.8	.0481	3.28987	0	1.58167	-1	7.21233	0	1.66705	-2
20.9	.0478	3.28987	0	1.57410	-1	7.21233	0	1.65114	-2
21.0	.0476	3.28987	0	1.56660	-1	7.21233	0	1.63545	-2
21.1	.0474	3.28987	0	1.55918	-1	7.21233	0	1.61998	-2
21.2	.0472	3.28987	0	1.55182	-1	7.21233	0	1.60474	-2
21.3	.0469	3.28987	0	1.54454	-1	7.21234	0	1.58971	-2
21.4	.0467	3.28987	0	1.53732	-1	7.21234	0	1.57488	-2
21.5	.0465	3.28987	0	1.53017	-1	7.21234	0	1.56027	-2
21.6	.0463	3.28987	0	1.52309	-1	7.21234	0	1.54585	-2
21.7	.0461	3.28987	0	1.51607	-1	7.21234	0	1.53164	-2
21.8	.0459	3.28987	0	1.50911	-1	7.21234	0	1.51762	-2
21.9	.0457	3.28987	0	1.50222	-1	7.21234	0	1.50379	-2
22.0	.0455	3.28987	0	1.49539	-1	7.21234	0	1.49015	-2
22.1	.0452	3.28987	0	1.48863	-1	7.21234	0	1.47670	-2
22.2	.0450	3.28987	0	1.48192	-1	7.21234	0	1.46342	-2
22.3	.0448	3.28987	0	1.47528	-1	7.21234	0	1.45033	-2
22.4	.0446	3.28987	0	1.46869	-1	7.21234	0	1.43741	-2
22.5	.0444	3.28987	0	1.46216	-1	7.21234	0	1.42466	-2
22.6	.0442	3.28987	0	1.45569	-1	7.21234	0	1.41208	-2
22.7	.0441	3.28987	0	1.44928	-1	7.21234	0	1.39967	-2
22.8	.0439	3.28987	0	1.44292	-1	7.21234	0	1.38742	-2
22.9	.0437	3.28987	0	1.43662	-1	7.21234	0	1.37532	-2
23.0	.0435	3.28987	0	1.43038	-1	7.21234	0	1.36339	-2
23.1	.0433	3.28987	0	1.42419	-1	7.21234	0	1.35161	-2
23.2	.0431	3.28987	0	1.41805	-1	7.21234	0	1.33999	-2
23.3	.0429	3.28987	0	1.41196	-1	7.21234	0	1.32851	-2
23.4	.0427	3.28987	0	1.40593	-1	7.21234	0	1.31718	-2
23.5	.0426	3.28987	0	1.39994	-1	7.21234	0	1.30599	-2
23.6	.0424	3.28987	0	1.39401	-1	7.21234	0	1.29495	-2
23.7	.0422	3.28987	0	1.38813	-1	7.21234	0	1.28404	-2
23.8	.0420	3.28987	0	1.38230	-1	7.21234	0	1.27328	-2
23.9	.0418	3.28987	0	1.37651	-1	7.21234	0	1.26264	-2
24.0	.0417	3.28987	0	1.37078	-1	7.21234	0	1.25214	-2
24.1	.0415	3.28987	0	1.36509	-1	7.21234	0	1.24177	-2
24.2	.0413	3.28987	0	1.35945	-1	7.21234	0	1.23153	-2
24.3	.0412	3.28987	0	1.35386	-1	7.21234	0	1.22142	-2
24.4	.0410	3.28987	0	1.34831	-1	7.21234	0	1.21143	-2
24.5	.0408	3.28987	0	1.34280	-1	7.21234	0	1.20156	-2
24.6	.0407	3.28987	0	1.33734	-1	7.21234	0	1.19181	-2
24.7	.0405	3.28987	0	1.33193	-1	7.21234	0	1.18218	-2
24.8	.0403	3.28987	0	1.32656	-1	7.21234	0	1.17266	-2
24.9	.0402	3.28987	0	1.32123	-1	7.21234	0	1.16326	-2
25.0	.0400	3.28987	0	1.31595	-1	7.21234	0	1.15397	-2

TABLE 4.

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 4 , 5

x	1/x	$J_4(x)$		$J_4(x)/x^3$		$J_5(x)$		$J_5(x)/x^4$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
.1	10.0000	3.33167	- 4	3.33167	-1	2.49861	- 5	2.49861	-1
.2	5.0000	2.66134	- 3	3.32668	-1	3.99112	- 4	2.49445	-1
.3	3.3333	8.95963	- 3	3.31838	-1	2.01491	- 3	2.48754	-1
.4	2.5000	2.11636	- 2	3.30682	-1	6.34345	- 3	2.47791	-1
.5	2.0000	4.11504	- 2	3.29204	-1	1.54100	- 2	2.46560	-1
.6	1.6667	7.07205	- 2	3.27410	-1	3.17607	- 2	2.45067	-1
.7	1.4286	1.11580	- 1	3.25307	-1	5.84206	- 2	2.43318	-1
.8	1.2500	1.65328	- 1	3.22906	-1	9.88448	- 2	2.41320	-1
.9	1.1111	2.33436	- 1	3.20214	-1	1.56862	- 1	2.39083	-1
1.0	1.0000	3.17244	- 1	3.17244	-1	2.36616	- 1	2.36616	-1
1.1	.9091	4.17943	- 1	3.14007	-1	3.42495	- 1	2.33929	-1
1.2	.8333	5.36570	- 1	3.10515	-1	4.79069	- 1	2.31033	-1
1.3	.7692	6.74000	- 1	3.06782	-1	6.51017	- 1	2.27939	-1
1.4	.7143	8.30945	- 1	3.02822	-1	8.63057	- 1	2.24661	-1
1.5	.6667	1.00794	0	2.98650	-1	1.11988	0	2.21210	-1
1.6	.6250	1.20537	0	2.94281	-1	1.42606	0	2.17600	-1
1.7	.5882	1.42344	0	2.89729	-1	1.78604	0	2.13843	-1
1.8	.5556	1.66218	0	2.85010	-1	2.20401	0	2.09954	-1
1.9	.5263	1.92149	0	2.80141	-1	2.68390	0	2.05945	-1
2.0	.5000	2.20109	0	2.75136	-1	3.22929	0	2.01831	-1
2.1	.4762	2.50058	0	2.70011	-1	3.84340	0	1.97624	-1
2.2	.4545	2.81940	0	2.64782	-1	4.52904	0	1.93337	-1
2.3	.4348	3.15690	0	2.59464	-1	5.28855	0	1.88984	-1
2.4	.4167	3.51227	0	2.54071	-1	6.12384	0	1.84577	-1
2.5	.4000	3.88465	0	2.48618	-1	7.03630	0	1.80129	-1
2.6	.3846	4.27305	0	2.43118	-1	8.02684	0	1.75651	-1
2.7	.3704	4.67641	0	2.37586	-1	9.09587	0	1.71155	-1
2.8	.3571	5.09362	0	2.32034	-1	1.02433	1	1.66651	-1
2.9	.3448	5.52349	0	2.26475	-1	1.14685	1	1.62150	-1
3.0	.3333	5.96482	0	2.20919	-1	1.27706	1	1.57661	-1
3.1	.3226	6.41636	0	2.15379	-1	1.41478	1	1.53194	-1
3.2	.3125	6.87683	0	2.09864	-1	1.55984	1	1.48758	-1
3.3	.3030	7.34497	0	2.04385	-1	1.71199	1	1.44360	-1
3.4	.2941	7.81951	0	1.98949	-1	1.87096	1	1.40007	-1
3.5	.2857	8.29917	0	1.93567	-1	2.03645	1	1.35707	-1
3.6	.2778	8.78271	0	1.88244	-1	2.20811	1	1.31465	-1
3.7	.2703	9.26892	0	1.82989	-1	2.38558	1	1.27288	-1
3.8	.2632	9.75662	0	1.77807	-1	2.56847	1	1.23180	-1
3.9	.2564	1.02447	1	1.72704	-1	2.75636	1	1.19146	-1
4.0	.2500	1.07319	1	1.67686	-1	2.94883	1	1.15189	-1
4.1	.2439	1.12174	1	1.62757	-1	3.14545	1	1.11313	-1
4.2	.2381	1.17001	1	1.57921	-1	3.34575	1	1.07522	-1
4.3	.2326	1.21790	1	1.53181	-1	3.54928	1	1.03816	-1
4.4	.2273	1.26532	1	1.48540	-1	3.75558	1	1.00200	-1
4.5	.2222	1.31220	1	1.44001	-1	3.96420	1	9.66730	-2
4.6	.2174	1.35846	1	1.39564	-1	4.17468	1	9.32377	-2
4.7	.2128	1.40403	1	1.35233	-1	4.38656	1	8.98945	-2
4.8	.2083	1.44885	1	1.31008	-1	4.59942	1	8.66439	-2
4.9	.2041	1.49284	1	1.26890	-1	4.81280	1	8.34860	-2
5.0	.2000	1.53598	1	1.22878	-1	5.02631	1	8.04210	-2

TABLE 4.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 4, 5 (con't.)

x	1/x	$J_4(x)$		$J_4(x)/x^3$		$J_5(x)$		$J_5(x)/x^4$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
5.1	.1961	1.57820	1	1.18974	-1	5.23953	1	7.74482	-2
5.2	.1923	1.61947	1	1.15176	-1	5.45207	1	7.45672	-2
5.3	.1887	1.65976	1	1.11485	-1	5.66356	1	7.17771	-2
5.4	.1852	1.69903	1	1.07899	-1	5.87364	1	6.90769	-2
5.5	.1818	1.73726	1	1.04418	-1	6.08199	1	6.64653	-2
5.6	.1786	1.77443	1	1.01040	-1	6.28829	1	6.39411	-2
5.7	.1754	1.81053	1	9.77644	-2	6.49223	1	6.15028	-2
5.8	.1724	1.84554	1	9.45889	-2	6.69355	1	5.91486	-2
5.9	.1695	1.87947	1	9.15121	-2	6.89200	1	5.68771	-2
6.0	.1667	1.91230	1	8.85323	-2	7.08734	1	5.46862	-2
6.1	.1639	1.94404	1	8.56475	-2	7.27935	1	5.25742	-2
6.2	.1613	1.97469	1	8.28559	-2	7.46784	1	5.05392	-2
6.3	.1587	2.00426	1	8.01553	-2	7.65265	1	4.85791	-2
6.4	.1563	2.03276	1	7.75436	-2	7.83362	1	4.66920	-2
6.5	.1538	2.06020	1	7.50187	-2	8.01062	1	4.48758	-2
6.6	.1515	2.08660	1	7.25784	-2	8.18352	1	4.31285	-2
6.7	.1493	2.11197	1	7.02205	-2	8.35224	1	4.14480	-2
6.8	.1471	2.13634	1	6.79428	-2	8.51669	1	3.98323	-2
6.9	.1449	2.15971	1	6.57429	-2	8.67682	1	3.82793	-2
7.0	.1429	2.18212	1	6.36188	-2	8.83256	1	3.67870	-2
7.1	.1408	2.20359	1	6.15681	-2	8.98389	1	3.53534	-2
7.2	.1389	2.22414	1	5.95887	-2	9.13078	1	3.39764	-2
7.3	.1370	2.24379	1	5.76784	-2	9.27324	1	3.26543	-2
7.4	.1351	2.26257	1	5.58349	-2	9.41125	1	3.13849	-2
7.5	.1333	2.28050	1	5.40563	-2	9.54485	1	3.01664	-2
7.6	.1316	2.29761	1	5.23403	-2	9.67405	1	2.89971	-2
7.7	.1299	2.31393	1	5.06849	-2	9.79890	1	2.78750	-2
7.8	.1282	2.32949	1	4.90881	-2	9.91943	1	2.67984	-2
7.9	.1266	2.34430	1	4.75480	-2	1.00357	2	2.57656	-2
8.0	.1250	2.35840	1	4.60625	-2	1.01478	2	2.47749	-2
8.1	.1235	2.37181	1	4.46297	-2	1.02557	2	2.38246	-2
8.2	.1220	2.38456	1	4.32480	-2	1.03596	2	2.29133	-2
8.3	.1205	2.39667	1	4.19154	-2	1.04595	2	2.20394	-2
8.4	.1190	2.40816	1	4.06301	-2	1.05555	2	2.12013	-2
8.5	.1176	2.41907	1	3.93906	-2	1.06477	2	2.03977	-2
8.6	.1163	2.42942	1	3.81951	-2	1.07362	2	1.96271	-2
8.7	.1149	2.43923	1	3.70421	-2	1.08210	2	1.88882	-2
8.8	.1136	2.44852	1	3.59299	-2	1.09023	2	1.81798	-2
8.9	.1124	2.45732	1	3.48572	-2	1.09802	2	1.75005	-2
9.0	.1111	2.46565	1	3.38224	-2	1.10547	2	1.68491	-2
9.1	.1099	2.47353	1	3.28241	-2	1.11260	2	1.62246	-2
9.2	.1087	2.48098	1	3.18610	-2	1.11942	2	1.56257	-2
9.3	.1075	2.48801	1	3.09317	-2	1.12593	2	1.50514	-2
9.4	.1064	2.49466	1	3.00350	-2	1.13214	2	1.45007	-2
9.5	.1053	2.50094	1	2.91697	-2	1.13807	2	1.39726	-2
9.6	.1042	2.50686	1	2.83346	-2	1.14373	2	1.34660	-2
9.7	.1031	2.51245	1	2.75285	-2	1.14912	2	1.29801	-2
9.8	.1020	2.51772	1	2.67503	-2	1.15426	2	1.25141	-2
9.9	.1010	2.52269	1	2.59991	-2	1.15915	2	1.20670	-2
10.0	.1000	2.52737	1	2.52737	-2	1.16381	2	1.16381	-2

TABLE 4.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 4, 5 (con't.)

x	1/x	$J_4(x)$		$J_4(x)/x^3$		$J_5(x)$		$J_5(x)/x^4$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
10.1	.0990	2.53177	1	2.45731	-2	1.16824	2	1.12265	-2
10.2	.0980	2.53592	1	2.38966	-2	1.17245	2	1.08316	-2
10.3	.0971	2.53983	1	2.32430	-2	1.17645	2	1.04526	-2
10.4	.0962	2.54350	1	2.26116	-2	1.18025	2	1.00888	-2
10.5	.0952	2.54695	1	2.20015	-2	1.18386	2	9.73961	-3
10.6	.0943	2.55020	1	2.14119	-2	1.18728	2	9.40437	-3
10.7	.0935	2.55325	1	2.08421	-2	1.19053	2	9.08248	-3
10.8	.0926	2.55611	1	2.02912	-2	1.19361	2	8.77336	-3
10.9	.0917	2.55880	1	1.97586	-2	1.19652	2	8.47648	-3
11.0	.0909	2.56132	1	1.92436	-2	1.19929	2	8.19131	-3
11.1	.0901	2.56369	1	1.87455	-2	1.20191	2	7.91733	-3
11.2	.0893	2.56592	1	1.82637	-2	1.20438	2	7.65408	-3
11.3	.0885	2.56800	1	1.77975	-2	1.20673	2	7.40109	-3
11.4	.0877	2.56995	1	1.73465	-2	1.20895	2	7.15793	-3
11.5	.0870	2.57178	1	1.69099	-2	1.21104	2	6.92417	-3
11.6	.0862	2.57350	1	1.64873	-2	1.21302	2	6.69942	-3
11.7	.0855	2.57511	1	1.60782	-2	1.21489	2	6.48328	-3
11.8	.0847	2.57661	1	1.56820	-2	1.21666	2	6.27541	-3
11.9	.0840	2.57802	1	1.52984	-2	1.21833	2	6.07543	-3
12.0	.0833	2.57933	1	1.49267	-2	1.21990	2	5.88302	-3
12.1	.0826	2.58057	1	1.45666	-2	1.22139	2	5.69787	-3
12.2	.0820	2.58172	1	1.42177	-2	1.22279	2	5.51966	-3
12.3	.0813	2.58280	1	1.38795	-2	1.22411	2	5.34811	-3
12.4	.0806	2.58381	1	1.35517	-2	1.22535	2	5.18292	-3
12.5	.0800	2.58475	1	1.32339	-2	1.22653	2	5.02385	-3
12.6	.0794	2.58563	1	1.29257	-2	1.22763	2	4.87063	-3
12.7	.0787	2.58645	1	1.26268	-2	1.22867	2	4.72302	-3
12.8	.0781	2.58721	1	1.23368	-2	1.22965	2	4.58079	-3
12.9	.0775	2.58793	1	1.20555	-2	1.23057	2	4.44372	-3
13.0	.0769	2.58860	1	1.17824	-2	1.23143	2	4.31159	-3
13.1	.0763	2.58922	1	1.15174	-2	1.23225	2	4.18420	-3
13.2	.0758	2.58980	1	1.12602	-2	1.23301	2	4.06136	-3
13.3	.0752	2.59035	1	1.10104	-2	1.23373	2	3.94288	-3
13.4	.0746	2.59085	1	1.07678	-2	1.23441	2	3.82859	-3
13.5	.0741	2.59133	1	1.05322	-2	1.23504	2	3.71832	-3
13.6	.0735	2.59176	1	1.03034	-2	1.23564	2	3.61189	-3
13.7	.0730	2.59217	1	1.00810	-2	1.23620	2	3.50917	-3
13.8	.0725	2.59256	1	9.86486	-3	1.23672	2	3.41001	-3
13.9	.0719	2.59291	1	9.65480	-3	1.23721	2	3.31425	-3
14.0	.0714	2.59324	1	9.45059	-3	1.23767	2	3.22177	-3
14.1	.0709	2.59355	1	9.25204	-3	1.23811	2	3.13244	-3
14.2	.0704	2.59384	1	9.05895	-3	1.23851	2	3.04612	-3
14.3	.0699	2.59411	1	8.87114	-3	1.23889	2	2.96272	-3
14.4	.0694	2.59435	1	8.68844	-3	1.23925	2	2.88210	-3
14.5	.0690	2.59459	1	8.51067	-3	1.23959	2	2.80417	-3
14.6	.0685	2.59480	1	8.33768	-3	1.23990	2	2.72882	-3
14.7	.0680	2.59500	1	8.16931	-3	1.24019	2	2.65595	-3
14.8	.0676	2.59519	1	8.00541	-3	1.24047	2	2.58546	-3
14.9	.0671	2.59536	1	7.84583	-3	1.24072	2	2.51727	-3
15.0	.0667	2.59552	1	7.69043	-3	1.24096	2	2.45128	-3

TABLE 4.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 4, 5 (con't.)

x	1/x	$J_4(x)$		$J_4(x)/x^3$		$J_5(x)$		$J_5(x)/x^4$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
15.1	.0662	2.59567	1	7.53908	-3	1.24119	2	2.38742	-3
15.2	.0658	2.59581	1	7.39166	-3	1.24140	2	2.32561	-3
15.3	.0654	2.59594	1	7.24803	-3	1.24159	2	2.26576	-3
15.4	.0649	2.59606	1	7.10807	-3	1.24178	2	2.20781	-3
15.5	.0645	2.59617	1	6.97168	-3	1.24195	2	2.15168	-3
15.6	.0641	2.59627	1	6.83874	-3	1.24211	2	2.09731	-3
15.7	.0637	2.59637	1	6.70914	-3	1.24226	2	2.04463	-3
15.8	.0633	2.59646	1	6.58278	-3	1.24240	2	1.99358	-3
15.9	.0629	2.59654	1	6.45957	-3	1.24253	2	1.94410	-3
16.0	.0625	2.59661	1	6.33939	-3	1.24265	2	1.89614	-3
16.1	.0621	2.59669	1	6.22217	-3	1.24277	2	1.84964	-3
16.2	.0617	2.59675	1	6.10781	-3	1.24287	2	1.80454	-3
16.3	.0613	2.59681	1	5.99622	-3	1.24297	2	1.76080	-3
16.4	.0610	2.59687	1	5.88733	-3	1.24307	2	1.71838	-3
16.5	.0606	2.59692	1	5.78105	-3	1.24315	2	1.67721	-3
16.6	.0602	2.59697	1	5.67731	-3	1.24323	2	1.63727	-3
16.7	.0599	2.59702	1	5.57603	-3	1.24331	2	1.59850	-3
16.8	.0595	2.59706	1	5.47714	-3	1.24338	2	1.56087	-3
16.9	.0592	2.59710	1	5.38057	-3	1.24344	2	1.52433	-3
17.0	.0588	2.59713	1	5.28625	-3	1.24350	2	1.48885	-3
17.1	.0585	2.59717	1	5.19411	-3	1.24356	2	1.45440	-3
17.2	.0581	2.59720	1	5.10410	-3	1.24361	2	1.42093	-3
17.3	.0578	2.59723	1	5.01616	-3	1.24366	2	1.38841	-3
17.4	.0575	2.59725	1	4.93022	-3	1.24371	2	1.35682	-3
17.5	.0571	2.59728	1	4.84623	-3	1.24375	2	1.32612	-3
17.6	.0568	2.59730	1	4.76413	-3	1.24379	2	1.29627	-3
17.7	.0565	2.59732	1	4.68388	-3	1.24383	2	1.26726	-3
17.8	.0562	2.59734	1	4.60541	-3	1.24386	2	1.23906	-3
17.9	.0559	2.59736	1	4.52869	-3	1.24389	2	1.21163	-3
18.0	.0556	2.59737	1	4.45366	-3	1.24392	2	1.18496	-3
18.1	.0552	2.59739	1	4.38027	-3	1.24395	2	1.15902	-3
18.2	.0549	2.59740	1	4.30849	-3	1.24398	2	1.13378	-3
18.3	.0546	2.59742	1	4.23827	-3	1.24400	2	1.10922	-3
18.4	.0543	2.59743	1	4.16956	-3	1.24402	2	1.08532	-3
18.5	.0541	2.59744	1	4.10233	-3	1.24405	2	1.06206	-3
18.6	.0538	2.59745	1	4.03653	-3	1.24406	2	1.03942	-3
18.7	.0535	2.59746	1	3.97214	-3	1.24408	2	1.01738	-3
18.8	.0532	2.59747	1	3.90910	-3	1.24410	2	9.95918	-4
18.9	.0529	2.59748	1	3.84739	-3	1.24411	2	9.75019	-4
19.0	.0526	2.59748	1	3.78697	-3	1.24413	2	9.54665	-4
19.1	.0524	2.59749	1	3.72781	-3	1.24414	2	9.34839	-4
19.2	.0521	2.59750	1	3.66988	-3	1.24415	2	9.15524	-4
19.3	.0518	2.59750	1	3.61314	-3	1.24417	2	8.96704	-4
19.4	.0515	2.59751	1	3.55756	-3	1.24418	2	8.78366	-4
19.5	.0513	2.59751	1	3.50311	-3	1.24419	2	8.60493	-4
19.6	.0510	2.59752	1	3.44977	-3	1.24420	2	8.43072	-4
19.7	.0508	2.59752	1	3.39751	-3	1.24420	2	8.26089	-4
19.8	.0505	2.59753	1	3.34630	-3	1.24421	2	8.09532	-4
19.9	.0503	2.59753	1	3.29611	-3	1.24422	2	7.93387	-4
20.0	.0500	2.59754	1	3.24692	-3	1.24423	2	7.77642	-4

TABLE 4.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 4, 5 (con't.)

x	1/x	$J_4(x)$		$J_4(x)/x^3$		$J_5(x)$		$J_5(x)/x^4$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
20.1	.0498	2.59754	1	3.19870	-3	1.24423	2	7.62286	-4
20.2	.0495	2.59754	1	3.15143	-3	1.24424	2	7.47306	-4
20.3	.0493	2.59754	1	3.10509	-3	1.24424	2	7.32692	-4
20.4	.0490	2.59755	1	3.05966	-3	1.24425	2	7.18434	-4
20.5	.0488	2.59755	1	3.01510	-3	1.24425	2	7.04521	-4
20.6	.0485	2.59755	1	2.97141	-3	1.24426	2	6.90942	-4
20.7	.0483	2.59755	1	2.92855	-3	1.24426	2	6.77690	-4
20.8	.0481	2.59755	1	2.88652	-3	1.24427	2	6.64753	-4
20.9	.0478	2.59756	1	2.84529	-3	1.24427	2	6.52123	-4
21.0	.0476	2.59756	1	2.80484	-3	1.24427	2	6.39792	-4
21.1	.0474	2.59756	1	2.76515	-3	1.24428	2	6.27750	-4
21.2	.0472	2.59756	1	2.72620	-3	1.24428	2	6.15991	-4
21.3	.0469	2.59756	1	2.68799	-3	1.24428	2	6.04506	-4
21.4	.0467	2.59756	1	2.65048	-3	1.24428	2	5.93286	-4
21.5	.0465	2.59756	1	2.61367	-3	1.24429	2	5.82326	-4
21.6	.0463	2.59756	1	2.57754	-3	1.24429	2	5.71618	-4
21.7	.0461	2.59757	1	2.54207	-3	1.24429	2	5.61155	-4
21.8	.0459	2.59757	1	2.50725	-3	1.24429	2	5.50930	-4
21.9	.0457	2.59757	1	2.47306	-3	1.24429	2	5.40937	-4
22.0	.0455	2.59757	1	2.43949	-3	1.24430	2	5.31169	-4
22.1	.0452	2.59757	1	2.40652	-3	1.24430	2	5.21621	-4
22.2	.0450	2.59757	1	2.37415	-3	1.24430	2	5.12286	-4
22.3	.0448	2.59757	1	2.34235	-3	1.24430	2	5.03159	-4
22.4	.0446	2.59757	1	2.31112	-3	1.24430	2	4.94235	-4
22.5	.0444	2.59757	1	2.28045	-3	1.24430	2	4.85507	-4
22.6	.0442	2.59757	1	2.25031	-3	1.24430	2	4.76971	-4
22.7	.0441	2.59757	1	2.22070	-3	1.24430	2	4.68622	-4
22.8	.0439	2.59757	1	2.19161	-3	1.24430	2	4.60455	-4
22.9	.0437	2.59757	1	2.16302	-3	1.24430	2	4.52465	-4
23.0	.0435	2.59757	1	2.13493	-3	1.24431	2	4.44647	-4
23.1	.0433	2.59757	1	2.10733	-3	1.24431	2	4.36998	-4
23.2	.0431	2.59757	1	2.08019	-3	1.24431	2	4.29512	-4
23.3	.0429	2.59757	1	2.05353	-3	1.24431	2	4.22186	-4
23.4	.0427	2.59757	1	2.02731	-3	1.24431	2	4.15015	-4
23.5	.0426	2.59757	1	2.00154	-3	1.24431	2	4.07996	-4
23.6	.0424	2.59757	1	1.97620	-3	1.24431	2	4.01125	-4
23.7	.0422	2.59757	1	1.95129	-3	1.24431	2	3.94398	-4
23.8	.0420	2.59757	1	1.92680	-3	1.24431	2	3.87811	-4
23.9	.0418	2.59757	1	1.90272	-3	1.24431	2	3.81361	-4
24.0	.0417	2.59757	1	1.87903	-3	1.24431	2	3.75045	-4
24.1	.0415	2.59757	1	1.85574	-3	1.24431	2	3.68859	-4
24.2	.0413	2.59757	1	1.83283	-3	1.24431	2	3.62800	-4
24.3	.0412	2.59757	1	1.81029	-3	1.24431	2	3.56865	-4
24.4	.0410	2.59757	1	1.78813	-3	1.24431	2	3.51050	-4
24.5	.0408	2.59757	1	1.76632	-3	1.24431	2	3.45354	-4
24.6	.0407	2.59757	1	1.74487	-3	1.24431	2	3.39773	-4
24.7	.0405	2.59757	1	1.72376	-3	1.24431	2	3.34304	-4
24.8	.0403	2.59758	1	1.70299	-3	1.24431	2	3.28944	-4
24.9	.0402	2.59758	1	1.68256	-3	1.24431	2	3.23692	-4
25.0	.0400	2.59758	1	1.66245	-3	1.24431	2	3.18544	-4

TABLE 5.

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; $n = 6, 7$

x	1/x	$J_6(x)$		$J_6(x)/x^6$		$J_7(x)$		$J_7(x)/x^6$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
.1	10.0000	1.99881	- 6	1.99881	-1	1.66563	- 7	1.66563	-1
.2	5.0000	6.38479	- 5	1.99525	-1	1.06400	- 5	1.66251	-1
.3	3.3333	4.83406	- 4	1.98932	-1	1.20819	- 4	1.65733	-1
.4	2.5000	2.02862	- 3	1.98107	-1	6.75883	- 4	1.65011	-1
.5	2.0000	6.15789	- 3	1.97053	-1	2.56388	- 3	1.64088	-1
.6	1.6667	1.52234	- 2	1.95774	-1	7.60353	- 3	1.62970	-1
.7	1.4286	3.26520	- 2	1.94276	-1	1.90192	- 2	1.61661	-1
.8	1.2500	6.31003	- 2	1.92567	-1	4.19869	- 2	1.60167	-1
.9	1.1111	1.12579	- 1	1.90653	-1	8.42310	- 2	1.58495	-1
1.0	1.0000	1.88544	- 1	1.88544	-1	1.56653	- 1	1.56653	-1
1.1	.9091	2.99953	- 1	1.86247	-1	2.73970	- 1	1.54649	-1
1.2	.8333	4.57289	- 1	1.83774	-1	4.55336	- 1	1.52491	-1
1.3	.7692	6.72538	- 1	1.81134	-1	7.24935	- 1	1.50189	-1
1.4	.7143	9.59146	- 1	1.78338	-1	1.11251	0	1.47753	-1
1.5	.6667	1.33193	0	1.75398	-1	1.65382	0	1.45192	-1
1.6	.6250	1.80694	0	1.72324	-1	2.39102	0	1.42516	-1
1.7	.5882	2.40137	0	1.69128	-1	3.37290	0	1.39737	-1
1.8	.5556	3.13332	0	1.65822	-1	4.65504	0	1.36864	-1
1.9	.5263	4.02165	0	1.62419	-1	6.29982	0	1.33908	-1
2.0	.5000	5.08572	0	1.58929	-1	8.37631	0	1.30880	-1
2.1	.4762	6.34523	0	1.55364	-1	1.09600	1	1.27790	-1
2.2	.4545	7.81996	0	1.51737	-1	1.41326	1	1.24648	-1
2.3	.4348	9.52949	0	1.48058	-1	1.79810	1	1.21464	-1
2.4	.4167	1.14930	1	1.44337	-1	2.25976	1	1.18248	-1
2.5	.4000	1.37292	1	1.40587	-1	2.80786	1	1.15010	-1
2.6	.3846	1.62558	1	1.36817	-1	3.45237	1	1.11758	-1
2.7	.3704	1.90893	1	1.33037	-1	4.20353	1	1.08501	-1
2.8	.3571	2.22454	1	1.29256	-1	5.07173	1	1.05247	-1
2.9	.3448	2.57380	1	1.25483	-1	6.06741	1	1.02004	-1
3.0	.3333	2.95796	1	1.21727	-1	7.20097	1	9.87787	-2
3.1	.3226	3.37809	1	1.17995	-1	8.48266	1	9.55789	-2
3.2	.3125	3.83508	1	1.14294	-1	9.92248	1	9.24103	-2
3.3	.3030	4.32963	1	1.10632	-1	1.15301	2	8.92789	-2
3.4	.2941	4.86224	1	1.07014	-1	1.33147	2	8.61900	-2
3.5	.2857	5.43322	1	1.03447	-1	1.52849	2	8.31484	-2
3.6	.2778	6.04267	1	9.99348	-2	1.74487	2	8.01584	-2
3.7	.2703	6.69048	1	9.64826	-2	1.98136	2	7.72241	-2
3.8	.2632	7.37635	1	9.30944	-2	2.23859	2	7.43487	-2
3.9	.2564	8.09978	1	8.97740	-2	2.51714	2	7.15352	-2
4.0	.2500	8.86009	1	8.65243	-2	2.81749	2	6.87864	-2
4.1	.2439	9.65639	1	8.33481	-2	3.14003	2	6.61044	-2
4.2	.2381	1.04877	2	8.02476	-2	3.48503	2	6.34908	-2
4.3	.2326	1.13527	2	7.72248	-2	3.85270	2	6.09473	-2
4.4	.2273	1.22501	2	7.42810	-2	4.24312	2	5.84748	-2
4.5	.2222	1.31785	2	7.14174	-2	4.65626	2	5.60741	-2
4.6	.2174	1.41362	2	6.86347	-2	5.09203	2	5.37458	-2
4.7	.2128	1.51215	2	6.59333	-2	5.55021	2	5.14899	-2
4.8	.2083	1.61325	2	6.33135	-2	6.03049	2	4.93066	-2
4.9	.2041	1.71675	2	6.07752	-2	6.53245	2	4.71954	-2
5.0	.2000	1.82243	2	5.83178	-2	7.05561	2	4.51559	-2

TABLE 5.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 6, 7 (con't.)

x	1/x	$J_6(x)$		$J_6(x)/x^5$		$J_7(x)$		$J_7(x)/x^6$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
5.1	.1961	1.93011	2	5.59410	-2	7.59938	2	4.31874	-2
5.2	.1923	2.03956	2	5.36439	-2	8.16310	2	4.12891	-2
5.3	.1887	2.15060	2	5.14256	-2	8.74602	2	3.94598	-2
5.4	.1852	2.26299	2	4.92849	-2	9.34735	2	3.76987	-2
5.5	.1818	2.37654	2	4.72206	-2	9.96619	2	3.60042	-2
5.6	.1786	2.49103	2	4.52313	-2	1.06016	3	3.43751	-2
5.7	.1754	2.60626	2	4.33155	-2	1.12527	3	3.28100	-2
5.8	.1724	2.72202	2	4.14716	-2	1.19183	3	3.13073	-2
5.9	.1695	2.83810	2	3.96980	-2	1.25974	3	2.98654	-2
6.0	.1667	2.95432	2	3.79929	-2	1.32889	3	2.84828	-2
6.1	.1639	3.07049	2	3.63545	-2	1.39917	3	2.71576	-2
6.2	.1613	3.18641	2	3.47811	-2	1.47046	3	2.58883	-2
6.3	.1587	3.30191	2	3.32708	-2	1.54265	3	2.46731	-2
6.4	.1563	3.41683	2	3.18217	-2	1.61562	3	2.35104	-2
6.5	.1538	3.53098	2	3.04319	-2	1.68925	3	2.23983	-2
6.6	.1515	3.64423	2	2.90996	-2	1.76343	3	2.13351	-2
6.7	.1493	3.75643	2	2.78228	-2	1.83804	3	2.03192	-2
6.8	.1471	3.86743	2	2.65998	-2	1.91296	3	1.93488	-2
6.9	.1449	3.97711	2	2.54286	-2	1.98809	3	1.84222	-2
7.0	.1429	4.08535	2	2.43074	-2	2.06332	3	1.75379	-2
7.1	.1408	4.19203	2	2.32345	-2	2.13853	3	1.66942	-2
7.2	.1389	4.29706	2	2.22080	-2	2.21362	3	1.58894	-2
7.3	.1370	4.40033	2	2.12261	-2	2.28849	3	1.51221	-2
7.4	.1351	4.50177	2	2.02873	-2	2.36305	3	1.43907	-2
7.5	.1333	4.60130	2	1.93898	-2	2.43719	3	1.36937	-2
7.6	.1316	4.69884	2	1.85320	-2	2.51084	3	1.30298	-2
7.7	.1299	4.79435	2	1.77123	-2	2.58390	3	1.23974	-2
7.8	.1282	4.88776	2	1.69292	-2	2.65629	3	1.17953	-2
7.9	.1266	4.97903	2	1.61811	-2	2.72793	3	1.12220	-2
8.0	.1250	5.06812	2	1.54667	-2	2.79876	3	1.06764	-2
8.1	.1235	5.15502	2	1.47844	-2	2.86871	3	1.01573	-2
8.2	.1220	5.23968	2	1.41330	-2	2.93771	3	9.66330	-3
8.3	.1205	5.32210	2	1.35111	-2	3.00570	3	9.19342	-3
8.4	.1190	5.40226	2	1.29175	-2	3.07263	3	8.74652	-3
8.5	.1176	5.48016	2	1.23509	-2	3.13846	3	8.32152	-3
8.6	.1163	5.55580	2	1.18101	-2	3.20313	3	7.91742	-3
8.7	.1149	5.62918	2	1.12940	-2	3.26660	3	7.53322	-3
8.8	.1136	5.70032	2	1.08015	-2	3.32885	3	7.16800	-3
8.9	.1124	5.76923	2	1.03316	-2	3.38983	3	6.82084	-3
9.0	.1111	5.83593	2	9.88320	-3	3.44953	3	6.49089	-3
9.1	.1099	5.90044	2	9.45535	-3	3.50791	3	6.17731	-3
9.2	.1087	5.96279	2	9.04712	-3	3.56495	3	5.87932	-3
9.3	.1075	6.02301	2	8.65762	-3	3.62065	3	5.59615	-3
9.4	.1064	6.08113	2	8.28600	-3	3.67499	3	5.32708	-3
9.5	.1053	6.13718	2	7.93141	-3	3.72796	3	5.07142	-3
9.6	.1042	6.19120	2	7.59309	-3	3.77955	3	4.82850	-3
9.7	.1031	6.24324	2	7.27028	-3	3.82976	3	4.59771	-3
9.8	.1020	6.29332	2	6.96225	-3	3.87859	3	4.37842	-3
9.9	.1010	6.34150	2	6.66832	-3	3.92605	3	4.17008	-3
10.0	.1000	6.38782	2	6.38782	-3	3.97214	3	3.97214	-3

TABLE 5.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 6, 7 (con't.)

x	1/x	$J_6(x)$		$J_6(x)/x^5$		$J_7(x)$		$J_7(x)/x^6$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
10.1	.0990	6.43233	2	6.12014	-3	4.01686	3	3.78407	-3
10.2	.0980	6.47506	2	5.86466	-3	4.06023	3	3.60537	-3
10.3	.0971	6.51607	2	5.62082	-3	4.10227	3	3.43558	-3
10.4	.0962	6.55540	2	5.38806	-3	4.14297	3	3.27425	-3
10.5	.0952	6.59310	2	5.16587	-3	4.18237	3	3.12095	-3
10.6	.0943	6.62922	2	4.95374	-3	4.22048	3	2.97527	-3
10.7	.0935	6.66381	2	4.75120	-3	4.25731	3	2.83683	-3
10.8	.0926	6.69691	2	4.55780	-3	4.29289	3	2.70525	-3
10.9	.0917	6.72857	2	4.37311	-3	4.32724	3	2.58019	-3
11.0	.0909	6.75884	2	4.19671	-3	4.36039	3	2.46133	-3
11.1	.0901	6.78776	2	4.02821	-3	4.39235	3	2.34833	-3
11.2	.0893	6.81539	2	3.86724	-3	4.42315	3	2.24090	-3
11.3	.0885	6.84176	2	3.71343	-3	4.45282	3	2.13877	-3
11.4	.0877	6.86693	2	3.56647	-3	4.48138	3	2.04165	-3
11.5	.0870	6.89093	2	3.42601	-3	4.50885	3	1.94930	-3
11.6	.0862	6.91380	2	3.29175	-3	4.53528	3	1.86147	-3
11.7	.0855	6.93560	2	3.16341	-3	4.56068	3	1.77793	-3
11.8	.0847	6.95637	2	3.04069	-3	4.58507	3	1.69846	-3
11.9	.0840	6.97614	2	2.92335	-3	4.60850	3	1.62285	-3
12.0	.0833	6.99495	2	2.81111	-3	4.63098	3	1.55090	-3
12.1	.0826	7.01284	2	2.70375	-3	4.65254	3	1.48244	-3
12.2	.0820	7.02986	2	2.60104	-3	4.67321	3	1.41728	-3
12.3	.0813	7.04603	2	2.50276	-3	4.69302	3	1.35526	-3
12.4	.0806	7.06139	2	2.40870	-3	4.71199	3	1.29621	-3
12.5	.0800	7.07598	2	2.31866	-3	4.73016	3	1.23998	-3
12.6	.0794	7.08984	2	2.23246	-3	4.74754	3	1.18644	-3
12.7	.0787	7.10298	2	2.14992	-3	4.76417	3	1.13544	-3
12.8	.0781	7.11545	2	2.07087	-3	4.78007	3	1.08686	-3
12.9	.0775	7.12728	2	1.99515	-3	4.79526	3	1.04058	-3
13.0	.0769	7.13848	2	1.92260	-3	4.80978	3	9.96472	-4
13.1	.0763	7.14911	2	1.85308	-3	4.82364	3	9.54436	-4
13.2	.0758	7.15917	2	1.78646	-3	4.83687	3	9.14367	-4
13.3	.0752	7.16869	2	1.72259	-3	4.84949	3	8.76166	-4
13.4	.0746	7.17771	2	1.66135	-3	4.86153	3	8.39738	-4
13.5	.0741	7.18624	2	1.60263	-3	4.87301	3	8.04997	-4
13.6	.0735	7.19432	2	1.54630	-3	4.88394	3	7.71857	-4
13.7	.0730	7.20195	2	1.49227	-3	4.89436	3	7.40240	-4
13.8	.0725	7.20917	2	1.44042	-3	4.90428	3	7.10070	-4
13.9	.0719	7.21599	2	1.39066	-3	4.91373	3	6.81275	-4
14.0	.0714	7.22243	2	1.34290	-3	4.92272	3	6.53788	-4
14.1	.0709	7.22851	2	1.29704	-3	4.93127	3	6.27543	-4
14.2	.0704	7.23426	2	1.25300	-3	4.93940	3	6.02482	-4
14.3	.0699	7.23968	2	1.21071	-3	4.94712	3	5.78544	-4
14.4	.0694	7.24480	2	1.17008	-3	4.95447	3	5.55676	-4
14.5	.0690	7.24963	2	1.13103	-3	4.96144	3	5.33826	-4
14.6	.0685	7.25418	2	1.09351	-3	4.96807	3	5.12944	-4
14.7	.0680	7.25847	2	1.05745	-3	4.97435	3	4.92984	-4
14.8	.0676	7.26252	2	1.02277	-3	4.98032	3	4.73900	-4
14.9	.0671	7.26633	2	9.89427	-4	4.98598	3	4.55652	-4
15.0	.0667	7.26992	2	9.57356	-4	4.99135	3	4.38198	-4

TABLE 5.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 6, 7 (con't.)

x	1/x	$J_6(x)$		$J_6(x)/x^5$		$J_7(x)$		$J_7(x)/x^6$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
15.1	.0662	7.27330	2	9.26503	-4	4.99644	3	4.21501	-4
15.2	.0658	7.27649	2	8.96817	-4	5.00126	3	4.05525	-4
15.3	.0654	7.27948	2	8.68247	-4	5.00583	3	3.90236	-4
15.4	.0649	7.28230	2	8.40747	-4	5.01016	3	3.75602	-4
15.5	.0645	7.28496	2	8.14270	-4	5.01426	3	3.61590	-4
15.6	.0641	7.28745	2	7.88774	-4	5.01814	3	3.48173	-4
15.7	.0637	7.28980	2	7.64218	-4	5.02181	3	3.35322	-4
15.8	.0633	7.29201	2	7.40562	-4	5.02529	3	3.23012	-4
15.9	.0629	7.29408	2	7.17769	-4	5.02857	3	3.11216	-4
16.0	.0625	7.29603	2	6.95803	-4	5.03168	3	2.99912	-4
16.1	.0621	7.29786	2	6.74630	-4	5.03462	3	2.89076	-4
16.2	.0617	7.29958	2	6.54218	-4	5.03739	3	2.78686	-4
16.3	.0613	7.30119	2	6.34535	-4	5.04002	3	2.68724	-4
16.4	.0610	7.30271	2	6.15552	-4	5.04249	3	2.59169	-4
16.5	.0606	7.30413	2	5.97240	-4	5.04483	3	2.50002	-4
16.6	.0602	7.30546	2	5.79572	-4	5.04704	3	2.41206	-4
16.7	.0599	7.30671	2	5.62522	-4	5.04913	3	2.32765	-4
16.8	.0595	7.30789	2	5.46066	-4	5.05109	3	2.24662	-4
16.9	.0592	7.30899	2	5.30181	-4	5.05295	3	2.16883	-4
17.0	.0588	7.31002	2	5.14842	-4	5.05470	3	2.09412	-4
17.1	.0585	7.31099	2	5.00029	-4	5.05635	3	2.02237	-4
17.2	.0581	7.31190	2	4.85722	-4	5.05790	3	1.95344	-4
17.3	.0578	7.31274	2	4.71900	-4	5.05937	3	1.88721	-4
17.4	.0575	7.31354	2	4.58544	-4	5.06075	3	1.82356	-4
17.5	.0571	7.31429	2	4.45637	-4	5.06205	3	1.76237	-4
17.6	.0568	7.31498	2	4.33162	-4	5.06328	3	1.70355	-4
17.7	.0565	7.31564	2	4.21101	-4	5.06443	3	1.64699	-4
17.8	.0562	7.31625	2	4.09438	-4	5.06551	3	1.59259	-4
17.9	.0559	7.31682	2	3.98160	-4	5.06654	3	1.54026	-4
18.0	.0556	7.31736	2	3.87250	-4	5.06750	3	1.48990	-4
18.1	.0552	7.31786	2	3.76696	-4	5.06840	3	1.44145	-4
18.2	.0549	7.31833	2	3.66484	-4	5.06925	3	1.39481	-4
18.3	.0546	7.31877	2	3.56601	-4	5.07005	3	1.34991	-4
18.4	.0543	7.31918	2	3.47035	-4	5.07080	3	1.30668	-4
18.5	.0541	7.31956	2	3.37774	-4	5.07151	3	1.26505	-4
18.6	.0538	7.31992	2	3.28807	-4	5.07218	3	1.22495	-4
18.7	.0535	7.32025	2	3.20124	-4	5.07280	3	1.18631	-4
18.8	.0532	7.32056	2	3.11713	-4	5.07339	3	1.14908	-4
18.9	.0529	7.32086	2	3.03566	-4	5.07394	3	1.11320	-4
19.0	.0526	7.32113	2	2.95672	-4	5.07445	3	1.07862	-4
19.1	.0524	7.32138	2	2.88022	-4	5.07494	3	1.04528	-4
19.2	.0521	7.32162	2	2.80609	-4	5.07539	3	1.01312	-4
19.3	.0518	7.32184	2	2.73422	-4	5.07582	3	9.82115	-5
19.4	.0515	7.32205	2	2.66455	-4	5.07622	3	9.52205	-5
19.5	.0513	7.32224	2	2.59700	-4	5.07660	3	9.23348	-5
19.6	.0510	7.32242	2	2.53148	-4	5.07695	3	8.95502	-5
19.7	.0508	7.32259	2	2.46794	-4	5.07728	3	8.68628	-5
19.8	.0505	7.32275	2	2.40629	-4	5.07759	3	8.42688	-5
19.9	.0503	7.32290	2	2.34648	-4	5.07788	3	8.17644	-5
20.0	.0500	7.32303	2	2.28845	-4	5.07816	3	7.93462	-5

TABLE 5.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 6, 7 (con't.)

x	1/x	$J_6(x)$		$J_6(x)/x^5$		$J_7(x)$		$J_7(x)/x^6$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
20.1	.0498	7.32316	2	2.23212	-4	5.07841	3	7.70108	-5
20.2	.0495	7.32328	2	2.17745	-4	5.07865	3	7.47550	-5
20.3	.0493	7.32339	2	2.12438	-4	5.07888	3	7.25757	-5
20.4	.0490	7.32349	2	2.07285	-4	5.07909	3	7.04700	-5
20.5	.0488	7.32359	2	2.02281	-4	5.07928	3	6.84351	-5
20.6	.0485	7.32368	2	1.97421	-4	5.07947	3	6.64683	-5
20.7	.0483	7.32376	2	1.92700	-4	5.07964	3	6.45670	-5
20.8	.0481	7.32384	2	1.88114	-4	5.07980	3	6.27287	-5
20.9	.0478	7.32391	2	1.83659	-4	5.07995	3	6.09511	-5
21.0	.0476	7.32398	2	1.79329	-4	5.08009	3	5.92319	-5
21.1	.0474	7.32404	2	1.75121	-4	5.08022	3	5.75689	-5
21.2	.0472	7.32410	2	1.71031	-4	5.08035	3	5.59601	-5
21.3	.0469	7.32416	2	1.67055	-4	5.08046	3	5.44034	-5
21.4	.0467	7.32421	2	1.63189	-4	5.08057	3	5.28969	-5
21.5	.0465	7.32425	2	1.59430	-4	5.08067	3	5.14388	-5
21.6	.0463	7.32430	2	1.55775	-4	5.08077	3	5.00273	-5
21.7	.0461	7.32434	2	1.52219	-4	5.08085	3	4.86607	-5
21.8	.0459	7.32438	2	1.48761	-4	5.08094	3	4.73375	-5
21.9	.0457	7.32441	2	1.45396	-4	5.08101	3	4.60560	-5
22.0	.0455	7.32444	2	1.42122	-4	5.08109	3	4.48147	-5
22.1	.0452	7.32447	2	1.38936	-4	5.08115	3	4.36123	-5
22.2	.0450	7.32450	2	1.35836	-4	5.08122	3	4.24473	-5
22.3	.0448	7.32453	2	1.32818	-4	5.08128	3	4.13184	-5
22.4	.0446	7.32455	2	1.29880	-4	5.08133	3	4.02244	-5
22.5	.0444	7.32458	2	1.27019	-4	5.08138	3	3.91640	-5
22.6	.0442	7.32460	2	1.24234	-4	5.08143	3	3.81360	-5
22.7	.0441	7.32462	2	1.21522	-4	5.08147	3	3.71394	-5
22.8	.0439	7.32464	2	1.18881	-4	5.08151	3	3.61730	-5
22.9	.0437	7.32465	2	1.16308	-4	5.08155	3	3.52358	-5
23.0	.0435	7.32467	2	1.13802	-4	5.08159	3	3.43267	-5
23.1	.0433	7.32468	2	1.11360	-4	5.08162	3	3.34450	-5
23.2	.0431	7.32470	2	1.08981	-4	5.08166	3	3.25895	-5
23.3	.0429	7.32471	2	1.06662	-4	5.08168	3	3.17594	-5
23.4	.0427	7.32472	2	1.04403	-4	5.08171	3	3.09539	-5
23.5	.0426	7.32473	2	1.02200	-4	5.08174	3	3.01721	-5
23.6	.0424	7.32474	2	1.00054	-4	5.08176	3	2.94132	-5
23.7	.0422	7.32475	2	9.79605	-5	5.08178	3	2.86765	-5
23.8	.0420	7.32476	2	9.59199	-5	5.08180	3	2.79612	-5
23.9	.0418	7.32477	2	9.39300	-5	5.08182	3	2.72667	-5
24.0	.0417	7.32478	2	9.19895	-5	5.08184	3	2.65922	-5
24.1	.0415	7.32478	2	9.00968	-5	5.08186	3	2.59370	-5
24.2	.0413	7.32479	2	8.82507	-5	5.08187	3	2.53006	-5
24.3	.0412	7.32480	2	8.64498	-5	5.08189	3	2.46824	-5
24.4	.0410	7.32480	2	8.46928	-5	5.08190	3	2.40817	-5
24.5	.0408	7.32481	2	8.29785	-5	5.08191	3	2.34980	-5
24.6	.0407	7.32481	2	8.13057	-5	5.08193	3	2.29307	-5
24.7	.0405	7.32481	2	7.96731	-5	5.08194	3	2.23794	-5
24.8	.0403	7.32482	2	7.80798	-5	5.08195	3	2.18434	-5
24.9	.0402	7.32482	2	7.65245	-5	5.08196	3	2.13223	-5
25.0	.0400	7.32483	2	7.50062	-5	5.08196	3	2.08157	-5

TABLE 5.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 6, 7 (con't.)

x	1/x	$J_6(x)$		$J_6(x)/x^5$		$J_7(x)$		$J_7(x)/x^6$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
25.1	.0398	7.32483	2	7.35240	-5	5.08197	3	2.03231	-5
25.2	.0397	7.32483	2	7.20767	-5	5.08198	3	1.98440	-5
25.3	.0395	7.32484	2	7.06635	-5	5.08199	3	1.93781	-5
25.4	.0394	7.32484	2	6.92834	-5	5.08199	3	1.89248	-5
25.5	.0392	7.32484	2	6.79356	-5	5.08200	3	1.84839	-5
25.6	.0391	7.32484	2	6.66191	-5	5.08201	3	1.80549	-5
25.7	.0389	7.32484	2	6.53330	-5	5.08201	3	1.76375	-5
25.8	.0388	7.32485	2	6.40767	-5	5.08202	3	1.72313	-5
25.9	.0386	7.32485	2	6.28492	-5	5.08202	3	1.68360	-5
26.0	.0385	7.32485	2	6.16498	-5	5.08203	3	1.64512	-5
26.1	.0383	7.32485	2	6.04778	-5	5.08203	3	1.60766	-5
26.2	.0382	7.32485	2	5.93325	-5	5.08203	3	1.57119	-5
26.3	.0380	7.32485	2	5.82130	-5	5.08204	3	1.53569	-5
26.4	.0379	7.32486	2	5.71188	-5	5.08204	3	1.50112	-5
26.5	.0377	7.32486	2	5.60492	-5	5.08204	3	1.46745	-5
26.6	.0376	7.32486	2	5.50036	-5	5.08205	3	1.43466	-5
26.7	.0375	7.32486	2	5.39813	-5	5.08205	3	1.40272	-5
26.8	.0373	7.32486	2	5.29816	-5	5.08205	3	1.37161	-5
26.9	.0372	7.32486	2	5.20041	-5	5.08205	3	1.34130	-5
27.0	.0370	7.32486	2	5.10482	-5	5.08205	3	1.31177	-5
27.1	.0369	7.32486	2	5.01133	-5	5.08206	3	1.28299	-5
27.2	.0368	7.32486	2	4.91988	-5	5.08206	3	1.25495	-5
27.3	.0366	7.32486	2	4.83044	-5	5.08206	3	1.22762	-5
27.4	.0365	7.32486	2	4.74293	-5	5.08206	3	1.20098	-5
27.5	.0364	7.32486	2	4.65732	-5	5.08206	3	1.17502	-5
27.6	.0362	7.32486	2	4.57356	-5	5.08206	3	1.14970	-5
27.7	.0361	7.32487	2	4.49160	-5	5.08207	3	1.12502	-5
27.8	.0360	7.32487	2	4.41139	-5	5.08207	3	1.10096	-5
27.9	.0358	7.32487	2	4.33290	-5	5.08207	3	1.07749	-5
28.0	.0357	7.32487	2	4.25608	-5	5.08207	3	1.05461	-5
28.1	.0356	7.32487	2	4.18088	-5	5.08207	3	1.03229	-5
28.2	.0355	7.32487	2	4.10728	-5	5.08207	3	1.01052	-5
28.3	.0353	7.32487	2	4.03522	-5	5.08207	3	9.89287	-6
28.4	.0352	7.32487	2	3.96468	-5	5.08207	3	9.68569	-6
28.5	.0351	7.32487	2	3.89561	-5	5.08207	3	9.48357	-6
28.6	.0350	7.32487	2	3.82798	-5	5.08207	3	9.28634	-6
28.7	.0348	7.32487	2	3.76175	-5	5.08207	3	9.09389	-6
28.8	.0347	7.32487	2	3.69690	-5	5.08207	3	8.90607	-6
28.9	.0346	7.32487	2	3.63338	-5	5.08207	3	8.72276	-6
29.0	.0345	7.32487	2	3.57116	-5	5.08207	3	8.54384	-6
29.1	.0344	7.32487	2	3.51022	-5	5.08208	3	8.36918	-6
29.2	.0342	7.32487	2	3.45053	-5	5.08208	3	8.19868	-6
29.3	.0341	7.32487	2	3.39205	-5	5.08208	3	8.03222	-6
29.4	.0340	7.32487	2	3.33475	-5	5.08208	3	7.86968	-6
29.5	.0339	7.32487	2	3.27861	-5	5.08208	3	7.71097	-6
29.6	.0338	7.32487	2	3.22360	-5	5.08208	3	7.55598	-6
29.7	.0337	7.32487	2	3.16970	-5	5.08208	3	7.40462	-6
29.8	.0336	7.32487	2	3.11687	-5	5.08208	3	7.25678	-6
29.9	.0334	7.32487	2	3.06510	-5	5.08208	3	7.11237	-6
30.0	.0333	7.32487	2	3.01435	-5	5.08208	3	6.97130	-6

TABLE 6.

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 8, 9, 10, 11

x	1/x	$J_8(x)$		$J_9(x)$		$J_{10}(x)$		$J_{11}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
.1	10.0000	1.42765	- 8	1.24917	- 9	1.11035	-10	9.99306	-12
.2	5.0000	1.82384	- 6	3.19148	- 7	5.67340	- 8	1.02116	- 8
.3	3.3333	3.10613	- 5	8.15223	- 6	2.17363	- 6	5.86814	- 7
.4	2.5000	2.31646	- 4	8.10520	- 5	2.88115	- 5	1.03700	- 5
.5	2.0000	1.09817	- 3	4.80227	- 4	2.13354	- 4	9.59788	- 5
.6	1.6667	3.90713	- 3	2.04988	- 3	1.09267	- 3	5.89776	- 4
.7	1.4286	1.13986	- 2	6.97533	- 3	4.33699	- 3	2.73062	- 3
.8	1.2500	2.87484	- 2	2.01001	- 2	1.42796	- 2	1.02730	- 2
.9	1.1111	6.48566	- 2	5.09982	- 2	4.07486	- 2	3.29727	- 2
1.0	1.0000	1.33964	- 1	1.17002	- 1	1.03845	- 1	9.33432	- 2
1.1	.9091	2.57594	- 1	2.47381	- 1	2.41442	- 1	2.38664	- 1
1.2	.8333	4.66791	- 1	4.88830	- 1	5.20287	- 1	5.60895	- 1
1.3	.7692	8.04640	- 1	9.12429	- 1	1.05168	0	1.22786	0
1.4	.7143	1.32899	0	1.62214	0	2.01271	0	2.52979	0
1.5	.6667	2.11534	0	2.76490	0	3.67407	0	4.94603	0
1.6	.6250	3.25982	0	4.54229	0	6.43533	0	9.23724	0
1.7	.5882	4.88218	0	7.22374	0	1.08686	1	1.65690	1
1.8	.5556	7.12868	0	1.11610	1	1.77709	1	2.86727	1
1.9	.5263	1.01748	1	1.68038	1	2.82266	1	4.80506	1
2.0	.5000	1.42279	1	2.47166	1	4.36781	1	7.82299	1
2.1	.4762	1.95291	1	3.55955	1	6.60079	1	1.24072	2
2.2	.4545	2.63552	1	5.02858	1	9.76277	1	1.92144	2
2.3	.4348	3.50204	1	6.97990	1	1.41577	2	2.91148	2
2.4	.4167	4.58761	1	9.53298	1	2.01630	2	4.32424	2
2.5	.4000	5.93121	1	1.28271	2	2.82405	2	6.30516	2
2.6	.3846	7.57556	1	1.70229	2	3.89480	2	9.03804	2
2.7	.3704	9.56708	1	2.23035	2	5.29515	2	1.27520	3
2.8	.3571	1.19556	2	2.88756	2	7.10364	2	1.77291	3
2.9	.3448	1.47944	2	3.69701	2	9.41195	2	2.43124	3
3.0	.3333	1.81396	2	4.68429	2	1.23260	3	3.29144	3
3.1	.3226	2.20500	2	5.87747	2	1.59670	3	4.40262	3
3.2	.3125	2.65869	2	7.30711	2	2.04725	3	5.82262	3
3.3	.3030	3.18130	2	9.00621	2	2.59970	3	7.61899	3
3.4	.2941	3.77929	2	1.10101	3	3.27128	3	9.86985	3
3.5	.2857	4.45917	2	1.33564	3	4.08105	3	1.26648	4
3.6	.2778	5.22750	2	1.60848	3	5.04995	3	1.61058	4
3.7	.2703	6.09083	2	1.92368	3	6.20080	3	2.03080	4
3.8	.2632	7.05563	2	2.28556	3	7.55828	3	2.54004	4
3.9	.2564	8.12824	2	2.69861	3	9.14894	3	3.15265	4
4.0	.2500	9.31480	2	3.16740	3	1.10012	4	3.88450	4
4.1	.2439	1.06212	3	3.69661	3	1.31450	4	4.75301	4
4.2	.2381	1.20532	3	4.29098	3	1.56122	4	5.77719	4
4.3	.2326	1.36160	3	4.95527	3	1.84360	4	6.97763	4
4.4	.2273	1.53145	3	5.69423	3	2.16511	4	8.37655	4
4.5	.2222	1.71532	3	6.51258	3	2.52935	4	9.99775	4
4.6	.2174	1.91361	3	7.41494	3	2.93999	4	1.18666	5
4.7	.2128	2.12668	3	8.40584	3	3.40084	4	1.40100	5
4.8	.2083	2.35483	3	9.48967	3	3.91574	4	1.64562	5
4.9	.2041	2.59830	3	1.06706	4	4.48859	4	1.92350	5
5.0	.2000	2.85728	3	1.19527	4	5.12330	4	2.23774	5

TABLE 6.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 8,9,10,11 (con't.)

x	1/x	$J_8(x)$		$J_9(x)$		$J_{10}(x)$		$J_{11}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
5.1	.1961	3.13190	3	1.33397	4	5.82381	4	2.59155	5
5.2	.1923	3.42224	3	1.48350	4	6.59400	4	2.98826	5
5.3	.1887	3.72829	3	1.64419	4	7.43772	4	3.43128	5
5.4	.1852	4.05001	3	1.81633	4	8.35874	4	3.92408	5
5.5	.1818	4.38730	3	2.00016	4	9.36073	4	4.47024	5
5.6	.1786	4.73998	3	2.19591	4	1.04472	5	5.07333	5
5.7	.1754	5.10783	3	2.40376	4	1.16217	5	5.73696	5
5.8	.1724	5.49056	3	2.62385	4	1.28873	5	6.46476	5
5.9	.1695	5.88786	3	2.85628	4	1.42471	5	7.26033	5
6.0	.1667	6.29932	3	3.10111	4	1.57039	5	8.12724	5
6.1	.1639	6.72452	3	3.35836	4	1.72605	5	9.06901	5
6.2	.1613	7.16298	3	3.62802	4	1.89190	5	1.00891	6
6.3	.1587	7.61416	3	3.91002	4	2.06816	5	1.11908	6
6.4	.1563	8.07752	3	4.20427	4	2.25501	5	1.23774	6
6.5	.1538	8.55245	3	4.51060	4	2.45261	5	1.36520	6
6.6	.1515	9.03832	3	4.82886	4	2.66107	5	1.50175	6
6.7	.1493	9.53447	3	5.15881	4	2.88050	5	1.64768	6
6.8	.1471	1.00402	4	5.50020	4	3.11095	5	1.80324	6
6.9	.1449	1.05549	4	5.85273	4	3.35244	5	1.96868	6
7.0	.1429	1.10777	4	6.21609	4	3.60498	5	2.14420	6
7.1	.1408	1.16079	4	6.58991	4	3.86854	5	2.33001	6
7.2	.1389	1.21448	4	6.97380	4	4.14303	5	2.52629	6
7.3	.1370	1.26876	4	7.36735	4	4.42836	5	2.73316	6
7.4	.1351	1.32356	4	7.77012	4	4.72441	5	2.95076	6
7.5	.1333	1.37880	4	8.18165	4	5.03100	5	3.17918	6
7.6	.1316	1.43440	4	8.60144	4	5.34795	5	3.41849	6
7.7	.1299	1.49029	4	9.02900	4	5.67504	5	3.66872	6
7.8	.1282	1.54639	4	9.46379	4	6.01201	5	3.92988	6
7.9	.1266	1.60263	4	9.90529	4	6.35859	5	4.20195	6
8.0	.1250	1.65894	4	1.03530	5	6.71448	5	4.48490	6
8.1	.1235	1.71525	4	1.08062	5	7.07936	5	4.77863	6
8.2	.1220	1.77148	4	1.12645	5	7.45288	5	5.08306	6
8.3	.1205	1.82757	4	1.17273	5	7.83467	5	5.39804	6
8.4	.1190	1.88346	4	1.21939	5	8.22433	5	5.72341	6
8.5	.1176	1.93908	4	1.26639	5	8.62147	5	6.05900	6
8.6	.1163	1.99437	4	1.31367	5	9.02567	5	6.40460	6
8.7	.1149	2.04928	4	1.36116	5	9.43648	5	6.75996	6
8.8	.1136	2.10374	4	1.40881	5	9.85347	5	7.12483	6
8.9	.1124	2.15771	4	1.45658	5	1.02762	6	7.49892	6
9.0	.1111	2.21114	4	1.50439	5	1.07041	6	7.88193	6
9.1	.1099	2.26397	4	1.55221	5	1.11368	6	8.27354	6
9.2	.1087	2.31617	4	1.59997	5	1.15738	6	8.67341	6
9.3	.1075	2.36769	4	1.64762	5	1.20146	6	9.08117	6
9.4	.1064	2.41849	4	1.69512	5	1.24588	6	9.49644	6
9.5	.1053	2.46855	4	1.74242	5	1.29058	6	9.91883	6
9.6	.1042	2.51781	4	1.78947	5	1.33551	6	1.03479	7
9.7	.1031	2.56627	4	1.83623	5	1.38063	6	1.07834	7
9.8	.1020	2.61388	4	1.88265	5	1.42589	6	1.12246	7
9.9	.1010	2.66062	4	1.92869	5	1.47124	6	1.16713	7
10.0	.1000	2.70648	4	1.97432	5	1.51664	6	1.21230	7

TABLE 6.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 8,9,10,11 (con't.)

x	1/x	$J_8(x)$		$J_9(x)$		$J_{10}(x)$		$J_{11}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
10.1	.0990	2.75143	4	2.01949	5	1.56203	6	1.25793	7
10.2	.0980	2.79545	4	2.06417	5	1.60738	6	1.30396	7
10.3	.0971	2.83853	4	2.10833	5	1.65265	6	1.35035	7
10.4	.0962	2.88066	4	2.15193	5	1.69778	6	1.39706	7
10.5	.0952	2.92183	4	2.19495	5	1.74273	6	1.44404	7
10.6	.0943	2.96203	4	2.23736	5	1.78748	6	1.49124	7
10.7	.0935	3.00126	4	2.27914	5	1.83197	6	1.53863	7
10.8	.0926	3.03951	4	2.32026	5	1.87617	6	1.58614	7
10.9	.0917	3.07678	4	2.36069	5	1.92004	6	1.63374	7
11.0	.0909	3.11307	4	2.40043	5	1.96355	6	1.68139	7
11.1	.0901	3.14838	4	2.43945	5	2.00667	6	1.72904	7
11.2	.0893	3.18272	4	2.47775	5	2.04937	6	1.77664	7
11.3	.0885	3.21610	4	2.51529	5	2.09160	6	1.82416	7
11.4	.0877	3.24851	4	2.55208	5	2.13336	6	1.87155	7
11.5	.0870	3.27998	4	2.58810	5	2.17461	6	1.91878	7
11.6	.0862	3.31049	4	2.62335	5	2.21532	6	1.96580	7
11.7	.0855	3.34008	4	2.65782	5	2.25547	6	2.01258	7
11.8	.0847	3.36875	4	2.69150	5	2.29505	6	2.05908	7
11.9	.0840	3.39650	4	2.72439	5	2.33402	6	2.10526	7
12.0	.0833	3.42337	4	2.75649	5	2.37238	6	2.15110	7
12.1	.0826	3.44935	4	2.78780	5	2.41010	6	2.19656	7
12.2	.0820	3.47446	4	2.81831	5	2.44718	6	2.24160	7
12.3	.0813	3.49873	4	2.84804	5	2.48359	6	2.28621	7
12.4	.0806	3.52216	4	2.87698	5	2.51933	6	2.33034	7
12.5	.0800	3.54478	4	2.90513	5	2.55438	6	2.37398	7
12.6	.0794	3.56659	4	2.93251	5	2.58874	6	2.41710	7
12.7	.0787	3.58763	4	2.95912	5	2.62240	6	2.45968	7
12.8	.0781	3.60790	4	2.98496	5	2.65535	6	2.50169	7
12.9	.0775	3.62742	4	3.01005	5	2.68758	6	2.54311	7
13.0	.0769	3.64622	4	3.03439	5	2.71910	6	2.58393	7
13.1	.0763	3.66430	4	3.05799	5	2.74991	6	2.62412	7
13.2	.0758	3.68170	4	3.08087	5	2.77999	6	2.66368	7
13.3	.0752	3.69842	4	3.10303	5	2.80935	6	2.70258	7
13.4	.0746	3.71449	4	3.12448	5	2.83799	6	2.74082	7
13.5	.0741	3.72993	4	3.14524	5	2.86591	6	2.77837	7
13.6	.0735	3.74475	4	3.16532	5	2.89312	6	2.81524	7
13.7	.0730	3.75897	4	3.18474	5	2.91962	6	2.85141	7
13.8	.0725	3.77261	4	3.20349	5	2.94541	6	2.88687	7
13.9	.0719	3.78570	4	3.22161	5	2.97050	6	2.92162	7
14.0	.0714	3.79823	4	3.23910	5	2.99490	6	2.95566	7
14.1	.0709	3.81024	4	3.25598	5	3.01861	6	2.98897	7
14.2	.0704	3.82175	4	3.27225	5	3.04164	6	3.02156	7
14.3	.0699	3.83276	4	3.28794	5	3.06400	6	3.05342	7
14.4	.0694	3.84330	4	3.30306	5	3.08569	6	3.08455	7
14.5	.0690	3.85338	4	3.31763	5	3.10674	6	3.11496	7
14.6	.0685	3.86301	4	3.33165	5	3.12714	6	3.14464	7
14.7	.0680	3.87222	4	3.34514	5	3.14691	6	3.17360	7
14.8	.0676	3.88102	4	3.35812	5	3.16605	6	3.20184	7
14.9	.0671	3.88943	4	3.37061	5	3.18459	6	3.22937	7
15.0	.0667	3.89746	4	3.38260	5	3.20253	6	3.25618	7

TABLE 6.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 8,9,10,11 (con't.)

x	1/x	$J_8(x)$		$J_9(x)$		$J_{10}(x)$		$J_{11}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
15•1	•0662	3•90512	4	3•39413	5	3•21987	6	3•28229	7
15•2	•0658	3•91242	4	3•40520	5	3•23665	6	3•30770	7
15•3	•0654	3•91939	4	3•41583	5	3•25285	6	3•33242	7
15•4	•0649	3•92604	4	3•42603	5	3•26851	6	3•35645	7
15•5	•0645	3•93237	4	3•43581	5	3•28363	6	3•37980	7
15•6	•0641	3•93840	4	3•44520	5	3•29821	6	3•40249	7
15•7	•0637	3•94415	4	3•45419	5	3•31229	6	3•42451	7
15•8	•0633	3•94962	4	3•46281	5	3•32586	6	3•44589	7
15•9	•0629	3•95483	4	3•47106	5	3•33895	6	3•46663	7
16•0	•0625	3•95979	4	3•47897	5	3•35155	6	3•48674	7
16•1	•0621	3•96450	4	3•48653	5	3•36370	6	3•50623	7
16•2	•0617	3•96898	4	3•49377	5	3•37539	6	3•52511	7
16•3	•0613	3•97325	4	3•50070	5	3•38664	6	3•54340	7
16•4	•0610	3•97730	4	3•50732	5	3•39747	6	3•56110	7
16•5	•0606	3•98114	4	3•51365	5	3•40788	6	3•57822	7
16•6	•0602	3•98480	4	3•51970	5	3•41789	6	3•59479	7
16•7	•0599	3•98827	4	3•52548	5	3•42751	6	3•61081	7
16•8	•0595	3•99156	4	3•53099	5	3•43675	6	3•62629	7
16•9	•0592	3•99469	4	3•53626	5	3•44563	6	3•64124	7
17•0	•0588	3•99766	4	3•54129	5	3•45415	6	3•65568	7
17•1	•0585	4•00047	4	3•54608	5	3•46232	6	3•66962	7
17•2	•0581	4•00313	4	3•55066	5	3•47017	6	3•68307	7
17•3	•0578	4•00566	4	3•55502	5	3•47769	6	3•69605	7
17•4	•0575	4•00806	4	3•55917	5	3•48490	6	3•70856	7
17•5	•0571	4•01033	4	3•56313	5	3•49181	6	3•72062	7
17•6	•0568	4•01248	4	3•56691	5	3•49843	6	3•73224	7
17•7	•0565	4•01451	4	3•57050	5	3•50477	6	3•74343	7
17•8	•0562	4•01644	4	3•57392	5	3•51084	6	3•75421	7
17•9	•0559	4•01826	4	3•57718	5	3•51666	6	3•76458	7
18•0	•0556	4•01999	4	3•58027	5	3•52222	6	3•77456	7
18•1	•0552	4•02162	4	3•58322	5	3•52753	6	3•78416	7
18•2	•0549	4•02317	4	3•58602	5	3•53262	6	3•79339	7
18•3	•0546	4•02463	4	3•58869	5	3•53748	6	3•80226	7
18•4	•0543	4•02601	4	3•59122	5	3•54213	6	3•81079	7
18•5	•0541	4•02731	4	3•59362	5	3•54657	6	3•81898	7
18•6	•0538	4•02854	4	3•59591	5	3•55081	6	3•82684	7
18•7	•0535	4•02971	4	3•59808	5	3•55485	6	3•83439	7
18•8	•0532	4•03081	4	3•60014	5	3•55872	6	3•84163	7
18•9	•0529	4•03184	4	3•60210	5	3•56241	6	3•84859	7
19•0	•0526	4•03282	4	3•60395	5	3•56592	6	3•85525	7
19•1	•0524	4•03375	4	3•60571	5	3•56928	6	3•86164	7
19•2	•0521	4•03462	4	3•60738	5	3•57248	6	3•86777	7
19•3	•0518	4•03544	4	3•60897	5	3•57553	6	3•87364	7
19•4	•0515	4•03622	4	3•61047	5	3•57843	6	3•87926	7
19•5	•0513	4•03695	4	3•61189	5	3•58120	6	3•88464	7
19•6	•0510	4•03764	4	3•61324	5	3•58384	6	3•88980	7
19•7	•0508	4•03829	4	3•61452	5	3•58635	6	3•89473	7
19•8	•0505	4•03890	4	3•61573	5	3•58874	6	3•89945	7
19•9	•0503	4•03948	4	3•61688	5	3•59101	6	3•90397	7
20•0	•0500	4•04002	4	3•61796	5	3•59318	6	3•90828	7

TABLE 6.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 8,9,10,11 (con't.)

x	1/x	$J_8(x)$		$J_9(x)$		$J_{10}(x)$		$J_{11}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
20.1	.0498	4.04054	4	3.61899	5	3.59523	6	3.91241	7
20.2	.0495	4.04102	4	3.61996	5	3.59719	6	3.91636	7
20.3	.0493	4.04147	4	3.62088	5	3.59905	6	3.92012	7
20.4	.0490	4.04190	4	3.62175	5	3.60082	6	3.92373	7
20.5	.0488	4.04230	4	3.62257	5	3.60250	6	3.92716	7
20.6	.0485	4.04268	4	3.62335	5	3.60410	6	3.93045	7
20.7	.0483	4.04304	4	3.62408	5	3.60562	6	3.93358	7
20.8	.0481	4.04337	4	3.62478	5	3.60706	6	3.93657	7
20.9	.0478	4.04369	4	3.62543	5	3.60843	6	3.93942	7
21.0	.0476	4.04398	4	3.62605	5	3.60973	6	3.94214	7
21.1	.0474	4.04426	4	3.62664	5	3.61096	6	3.94473	7
21.2	.0472	4.04452	4	3.62719	5	3.61213	6	3.94721	7
21.3	.0469	4.04477	4	3.62771	5	3.61324	6	3.94956	7
21.4	.0467	4.04500	4	3.62820	5	3.61429	6	3.95181	7
21.5	.0465	4.04521	4	3.62867	5	3.61528	6	3.95395	7
21.6	.0463	4.04542	4	3.62911	5	3.61623	6	3.95598	7
21.7	.0461	4.04561	4	3.62952	5	3.61713	6	3.95792	7
21.8	.0459	4.04579	4	3.62991	5	3.61797	6	3.95977	7
21.9	.0457	4.04596	4	3.63028	5	3.61878	6	3.96153	7
22.0	.0455	4.04611	4	3.63063	5	3.61954	6	3.96320	7
22.1	.0452	4.04626	4	3.63095	5	3.62026	6	3.96479	7
22.2	.0450	4.04640	4	3.63126	5	3.62094	6	3.96630	7
22.3	.0448	4.04653	4	3.63155	5	3.62159	6	3.96774	7
22.4	.0446	4.04665	4	3.63183	5	3.62220	6	3.96910	7
22.5	.0444	4.04677	4	3.63208	5	3.62278	6	3.97040	7
22.6	.0442	4.04688	4	3.63233	5	3.62333	6	3.97163	7
22.7	.0441	4.04698	4	3.63256	5	3.62384	6	3.97281	7
22.8	.0439	4.04707	4	3.63277	5	3.62433	6	3.97392	7
22.9	.0437	4.04716	4	3.63297	5	3.62480	6	3.97498	7
23.0	.0435	4.04724	4	3.63316	5	3.62523	6	3.97598	7
23.1	.0433	4.04732	4	3.63334	5	3.62565	6	3.97693	7
23.2	.0431	4.04739	4	3.63351	5	3.62604	6	3.97784	7
23.3	.0429	4.04746	4	3.63367	5	3.62641	6	3.97870	7
23.4	.0427	4.04753	4	3.63382	5	3.62675	6	3.97951	7
23.5	.0426	4.04759	4	3.63396	5	3.62708	6	3.98028	7
23.6	.0424	4.04764	4	3.63409	5	3.62739	6	3.98101	7
23.7	.0422	4.04770	4	3.63422	5	3.62769	6	3.98171	7
23.8	.0420	4.04774	4	3.63433	5	3.62796	6	3.98236	7
23.9	.0418	4.04779	4	3.63444	5	3.62823	6	3.98299	7
24.0	.0417	4.04783	4	3.63454	5	3.62847	6	3.98358	7
24.1	.0415	4.04787	4	3.63464	5	3.62870	6	3.98414	7
24.2	.0413	4.04791	4	3.63473	5	3.62892	6	3.98467	7
24.3	.0412	4.04795	4	3.63482	5	3.62913	6	3.98517	7
24.4	.0410	4.04798	4	3.63490	5	3.62933	6	3.98564	7
24.5	.0408	4.04801	4	3.63497	5	3.62951	6	3.98609	7
24.6	.0407	4.04804	4	3.63504	5	3.62968	6	3.98652	7
24.7	.0405	4.04807	4	3.63511	5	3.62985	6	3.98692	7
24.8	.0403	4.04809	4	3.63517	5	3.63000	6	3.98730	7
24.9	.0402	4.04811	4	3.63523	5	3.63014	6	3.98766	7
25.0	.0400	4.04814	4	3.63528	5	3.63028	6	3.98800	7

TABLE 6.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 8,9,10,11 (con't.)

x	1/x	$J_8(x)$		$J_9(x)$		$J_{10}(x)$		$J_{11}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
25.1	.0398	4.04816	4	3.63534	5	3.63041	6	3.98832	7
25.2	.0397	4.04818	4	3.63538	5	3.63053	6	3.98863	7
25.3	.0395	4.04819	4	3.63543	5	3.63064	6	3.98891	7
25.4	.0394	4.04821	4	3.63547	5	3.63075	6	3.98919	7
25.5	.0392	4.04823	4	3.63551	5	3.63085	6	3.98944	7
25.6	.0391	4.04824	4	3.63555	5	3.63095	6	3.98969	7
25.7	.0389	4.04825	4	3.63558	5	3.63104	6	3.98992	7
25.8	.0388	4.04827	4	3.63562	5	3.63112	6	3.99013	7
25.9	.0386	4.04828	4	3.63565	5	3.63120	6	3.99034	7
26.0	.0385	4.04829	4	3.63567	5	3.63127	6	3.99053	7
26.1	.0383	4.04830	4	3.63570	5	3.63134	6	3.99071	7
26.2	.0382	4.04831	4	3.63573	5	3.63141	6	3.99088	7
26.3	.0380	4.04832	4	3.63575	5	3.63147	6	3.99105	7
26.4	.0379	4.04833	4	3.63577	5	3.63153	6	3.99120	7
26.5	.0377	4.04833	4	3.63579	5	3.63159	6	3.99134	7
26.6	.0376	4.04834	4	3.63581	5	3.63164	6	3.99148	7
26.7	.0375	4.04835	4	3.63583	5	3.63168	6	3.99161	7
26.8	.0373	4.04835	4	3.63585	5	3.63173	6	3.99173	7
26.9	.0372	4.04836	4	3.63586	5	3.63177	6	3.99184	7
27.0	.0370	4.04837	4	3.63588	5	3.63181	6	3.99195	7
27.1	.0369	4.04837	4	3.63589	5	3.63185	6	3.99205	7
27.2	.0368	4.04838	4	3.63591	5	3.63189	6	3.99215	7
27.3	.0366	4.04838	4	3.63592	5	3.63192	6	3.99224	7
27.4	.0365	4.04838	4	3.63593	5	3.63195	6	3.99232	7
27.5	.0364	4.04839	4	3.63594	5	3.63198	6	3.99240	7
27.6	.0362	4.04839	4	3.63595	5	3.63201	6	3.99248	7
27.7	.0361	4.04840	4	3.63596	5	3.63203	6	3.99255	7
27.8	.0360	4.04840	4	3.63597	5	3.63206	6	3.99262	7
27.9	.0358	4.04840	4	3.63598	5	3.63208	6	3.99268	7
28.0	.0357	4.04840	4	3.63598	5	3.63210	6	3.99274	7
28.1	.0356	4.04841	4	3.63599	5	3.63212	6	3.99279	7
28.2	.0355	4.04841	4	3.63600	5	3.63214	6	3.99285	7
28.3	.0353	4.04841	4	3.63600	5	3.63215	6	3.99290	7
28.4	.0352	4.04841	4	3.63601	5	3.63217	6	3.99294	7
28.5	.0351	4.04842	4	3.63601	5	3.63219	6	3.99299	7
28.6	.0350	4.04842	4	3.63602	5	3.63220	6	3.99303	7
28.7	.0348	4.04842	4	3.63602	5	3.63221	6	3.99306	7
28.8	.0347	4.04842	4	3.63603	5	3.63223	6	3.99310	7
28.9	.0346	4.04842	4	3.63603	5	3.63224	6	3.99313	7
29.0	.0345	4.04842	4	3.63604	5	3.63225	6	3.99317	7
29.1	.0344	4.04842	4	3.63604	5	3.63226	6	3.99320	7
29.2	.0342	4.04843	4	3.63604	5	3.63227	6	3.99323	7
29.3	.0341	4.04843	4	3.63605	5	3.63228	6	3.99325	7
29.4	.0340	4.04843	4	3.63605	5	3.63229	6	3.99328	7
29.5	.0339	4.04843	4	3.63605	5	3.63230	6	3.99330	7
29.6	.0338	4.04843	4	3.63605	5	3.63230	6	3.99332	7
29.7	.0337	4.04843	4	3.63606	5	3.63231	6	3.99334	7
29.8	.0336	4.04843	4	3.63606	5	3.63232	6	3.99336	7
29.9	.0334	4.04843	4	3.63606	5	3.63232	6	3.99338	7
30.0	.0333	4.04843	4	3.63606	5	3.63233	6	3.99340	7

TABLE 6.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 8,9,10,11 (con't.)

x	1/x	$J_8(x)$		$J_9(x)$		$J_{10}(x)$		$J_{11}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
30.1	.0332	4.04843	4	3.63606	5	3.63233	6	3.99341	7
30.2	.0331	4.04843	4	3.63607	5	3.63234	6	3.99343	7
30.3	.0330	4.04843	4	3.63607	5	3.63234	6	3.99344	7
30.4	.0329	4.04843	4	3.63607	5	3.63235	6	3.99346	7
30.5	.0328	4.04843	4	3.63607	5	3.63235	6	3.99347	7
30.6	.0327	4.04843	4	3.63607	5	3.63236	6	3.99348	7
30.7	.0326	4.04844	4	3.63607	5	3.63236	6	3.99349	7
30.8	.0325	4.04844	4	3.63607	5	3.63236	6	3.99350	7
30.9	.0324	4.04844	4	3.63607	5	3.63237	6	3.99351	7
31.0	.0323	4.04844	4	3.63608	5	3.63237	6	3.99352	7
31.1	.0322	4.04844	4	3.63608	5	3.63237	6	3.99353	7
31.2	.0321	4.04844	4	3.63608	5	3.63237	6	3.99354	7
31.3	.0319	4.04844	4	3.63608	5	3.63238	6	3.99354	7
31.4	.0318	4.04844	4	3.63608	5	3.63238	6	3.99355	7
31.5	.0317	4.04844	4	3.63608	5	3.63238	6	3.99356	7
31.6	.0316	4.04844	4	3.63608	5	3.63238	6	3.99356	7
31.7	.0315	4.04844	4	3.63608	5	3.63238	6	3.99357	7
31.8	.0314	4.04844	4	3.63608	5	3.63239	6	3.99357	7
31.9	.0313	4.04844	4	3.63608	5	3.63239	6	3.99358	7
32.0	.0313	4.04844	4	3.63608	5	3.63239	6	3.99358	7
32.1	.0312	4.04844	4	3.63608	5	3.63239	6	3.99359	7
32.2	.0311	4.04844	4	3.63608	5	3.63239	6	3.99359	7
32.3	.0310	4.04844	4	3.63608	5	3.63239	6	3.99360	7
32.4	.0309	4.04844	4	3.63608	5	3.63239	6	3.99360	7
32.5	.0308	4.04844	4	3.63608	5	3.63239	6	3.99360	7
32.6	.0307	4.04844	4	3.63608	5	3.63240	6	3.99361	7
32.7	.0306	4.04844	4	3.63608	5	3.63240	6	3.99361	7
32.8	.0305	4.04844	4	3.63608	5	3.63240	6	3.99361	7
32.9	.0304	4.04844	4	3.63609	5	3.63240	6	3.99362	7
33.0	.0303	4.04844	4	3.63609	5	3.63240	6	3.99362	7
33.1	.0302	4.04844	4	3.63609	5	3.63240	6	3.99362	7
33.2	.0301	4.04844	4	3.63609	5	3.63240	6	3.99362	7
33.3	.0300	4.04844	4	3.63609	5	3.63240	6	3.99362	7
33.4	.0299	4.04844	4	3.63609	5	3.63240	6	3.99363	7
33.5	.0299	4.04844	4	3.63609	5	3.63240	6	3.99363	7
33.6	.0298	4.04844	4	3.63609	5	3.63240	6	3.99363	7
33.7	.0297	4.04844	4	3.63609	5	3.63240	6	3.99363	7
33.8	.0296	4.04844	4	3.63609	5	3.63240	6	3.99363	7
33.9	.0295	4.04844	4	3.63609	5	3.63240	6	3.99363	7
34.0	.0294	4.04844	4	3.63609	5	3.63240	6	3.99364	7
34.1	.0293	4.04844	4	3.63609	5	3.63240	6	3.99364	7
34.2	.0292	4.04844	4	3.63609	5	3.63240	6	3.99364	7
34.3	.0292	4.04844	4	3.63609	5	3.63241	6	3.99364	7
34.4	.0291	4.04844	4	3.63609	5	3.63241	6	3.99364	7
34.5	.0290	4.04844	4	3.63609	5	3.63241	6	3.99364	7
34.6	.0289	4.04844	4	3.63609	5	3.63241	6	3.99364	7
34.7	.0288	4.04844	4	3.63609	5	3.63241	6	3.99364	7
34.8	.0287	4.04844	4	3.63609	5	3.63241	6	3.99364	7
34.9	.0287	4.04844	4	3.63609	5	3.63241	6	3.99364	7
35.0	.0286	4.04844	4	3.63609	5	3.63241	6	3.99364	7

Table 7.

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
.1	10.0000	9.08450	-13	8.32738	-14	7.68675	-15
.2	5.0000	1.85658	- 9	3.40360	-10	6.28337	-11
.3	3.3333	1.60025	- 7	4.40032	- 8	1.21846	- 8
.4	2.5000	3.77028	- 6	1.38223	- 6	5.10299	- 7
.5	2.0000	4.36151	- 5	1.99857	- 5	9.22234	- 6
.6	1.6667	3.21572	- 4	1.76807	- 4	9.78957	- 5
.7	1.4286	1.73676	- 3	1.11392	- 3	7.19485	- 4
.8	1.2500	7.46618	- 3	5.47200	- 3	4.03882	- 3
.9	1.1111	2.69544	- 2	2.22210	- 2	1.84487	- 2
1.0	1.0000	8.47672	- 2	7.76325	- 2	7.16042	- 2
1.1	.9091	2.38357	- 1	2.40079	- 1	2.43540	- 1
1.2	.8333	6.10950	- 1	6.71165	- 1	7.42602	- 1
1.3	.7692	1.44851	0	1.72349	0	2.06544	0
1.4	.7143	3.21305	0	4.11609	0	5.31107	0
1.5	.6667	6.72854	0	9.23290	0	1.27615	1
1.6	.6250	1.33997	1	1.96074	1	2.89006	1
1.7	.5882	2.55286	1	3.96782	1	6.21237	1
1.8	.5556	4.67589	1	7.69270	1	1.27494	2
1.9	.5263	8.26816	1	1.43536	2	2.51033	2
2.0	.5000	1.41639	2	2.58739	2	4.76189	2
2.1	.4762	2.35771	2	4.52066	2	8.73318	2
2.2	.4545	3.82343	2	7.67721	2	1.55323	3
2.3	.4348	6.05403	2	1.27036	3	2.68607	3
2.4	.4167	9.37809	2	2.05260	3	4.52712	3
2.5	.4000	1.42368	3	3.24447	3	7.45130	3
2.6	.3846	2.12128	3	5.02540	3	1.19985	4
2.7	.3704	3.10641	3	7.63876	3	1.89320	4
2.8	.3571	4.47629	3	1.14096	4	2.93132	4
2.9	.3448	6.35403	3	1.67660	4	4.45941	4
3.0	.3333	8.89349	3	2.42637	4	6.67328	4
3.1	.3226	1.22849	4	3.46154	4	9.83330	4
3.2	.3125	1.67608	4	4.87245	4	1.42812	5
3.3	.3030	2.26024	4	6.77226	4	2.04602	5
3.4	.2941	3.01469	4	9.30125	4	2.89382	5
3.5	.2857	3.97945	4	1.26316	5	4.04354	5
3.6	.2778	5.20159	4	1.69726	5	5.58553	5
3.7	.2703	6.73608	4	2.25763	5	7.63206	5
3.8	.2632	8.64652	4	2.97439	5	1.03213	6
3.9	.2564	1.10060	5	3.88320	5	1.38220	6
4.0	.2500	1.38979	5	5.02597	5	1.83381	6
4.1	.2439	1.74166	5	6.45160	5	2.41145	6
4.2	.2381	2.16683	5	8.21671	5	3.14428	6
4.3	.2326	2.67717	5	1.03864	6	4.06678	6
4.4	.2273	3.28587	5	1.30352	6	5.21942	6
4.5	.2222	4.00750	5	1.62474	6	6.64938	6
4.6	.2174	4.85805	5	2.01185	6	8.41133	6
4.7	.2128	5.85495	5	2.47555	6	1.05682	7
4.8	.2083	7.01718	5	3.02775	6	1.31919	7
4.9	.2041	8.36519	5	3.68170	6	1.63645	7
5.0	.2000	9.92099	5	4.45200	6	2.01785	7

TABLE 7.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14 (con't.)

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
5.1	.1961	1.17081	6	5.35469	6	2.47383	7
5.2	.1923	1.37515	6	6.40727	6	3.01604	7
5.3	.1887	1.60777	6	7.62879	6	3.65749	7
5.4	.1852	1.87147	6	9.03984	6	4.41256	7
5.5	.1818	2.16917	6	1.06626	7	5.29716	7
5.6	.1786	2.50393	6	1.25208	7	6.32869	7
5.7	.1754	2.87894	6	1.46400	7	7.52623	7
5.8	.1724	3.29748	6	1.70470	7	8.91049	7
5.9	.1695	3.76294	6	1.97703	7	1.05039	8
6.0	.1667	4.27881	6	2.28402	7	1.23308	8
6.1	.1639	4.84865	6	2.62882	7	1.44172	8
6.2	.1613	5.47606	6	3.01472	7	1.67908	8
6.3	.1587	6.16470	6	3.44518	7	1.94816	8
6.4	.1563	6.91827	6	3.92375	7	2.25209	8
6.5	.1538	7.74046	6	4.45412	7	2.59423	8
6.6	.1515	8.63497	6	5.04009	7	2.97808	8
6.7	.1493	9.60546	6	5.68553	7	3.40735	8
6.8	.1471	1.06556	7	6.39443	7	3.88591	8
6.9	.1449	1.17889	7	7.17081	7	4.41779	8
7.0	.1429	1.30089	7	8.01876	7	5.00719	8
7.1	.1408	1.43189	7	8.94243	7	5.65844	8
7.2	.1389	1.57224	7	9.94596	7	6.37603	8
7.3	.1370	1.72223	7	1.10335	8	7.16457	8
7.4	.1351	1.88218	7	1.22092	8	8.02877	8
7.5	.1333	2.05236	7	1.34771	8	8.97347	8
7.6	.1316	2.23304	7	1.48414	8	1.00036	9
7.7	.1299	2.42447	7	1.63060	8	1.11240	9
7.8	.1282	2.62688	7	1.78747	8	1.23399	9
7.9	.1266	2.84047	7	1.95515	8	1.36563	9
8.0	.1250	3.06542	7	2.13399	8	1.50782	9
8.1	.1235	3.30189	7	2.32436	8	1.66107	9
8.2	.1220	3.55000	7	2.52658	8	1.82589	9
8.3	.1205	3.80987	7	2.74098	8	2.00278	9
8.4	.1190	4.08157	7	2.96786	8	2.19224	9
8.5	.1176	4.36515	7	3.20749	8	2.39474	9
8.6	.1163	4.66064	7	3.46015	8	2.61077	9
8.7	.1149	4.96803	7	3.72605	8	2.84079	9
8.8	.1136	5.28730	7	4.00542	8	3.08525	9
8.9	.1124	5.61838	7	4.29844	8	3.34456	9
9.0	.1111	5.96118	7	4.60526	8	3.61918	9
9.1	.1099	6.31560	7	4.92602	8	3.90947	9
9.2	.1087	6.68148	7	5.26081	8	4.21582	9
9.3	.1075	7.05867	7	5.60971	8	4.53857	9
9.4	.1064	7.44695	7	5.97273	8	4.87804	9
9.5	.1053	7.84612	7	6.34995	8	5.23452	9
9.6	.1042	8.25592	7	6.74132	8	5.60830	9
9.7	.1031	8.67610	7	7.14680	8	5.99959	9
9.8	.1020	9.10635	7	7.56630	8	6.40862	9
9.9	.1010	9.54636	7	7.99973	8	6.83555	9
10.0	.1000	9.99582	7	8.44693	8	7.28053	9

TABLE 7.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14 (con't.)

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
10•1	•0990	1•04543	8	8•90778	8	7•74367	9
10•2	•0980	1•09215	8	9•38202	8	8•22504	9
10•3	•0971	1•13971	8	9•86945	8	8•72466	9
10•4	•0962	1•18805	8	1•03698	9	9•24256	9
10•5	•0952	1•23715	8	1•08829	9	9•77869	9
10•6	•0943	1•28695	8	1•14083	9	1•03330	10
10•7	•0935	1•33741	8	1•19457	9	1•09054	10
10•8	•0926	1•38849	8	1•24948	9	1•14957	10
10•9	•0917	1•44014	8	1•30552	9	1•21037	10
11•0	•0909	1•49231	8	1•36265	9	1•27293	10
11•1	•0901	1•54496	8	1•42083	9	1•33721	10
11•2	•0893	1•59804	8	1•48001	9	1•40320	10
11•3	•0885	1•65149	8	1•54015	9	1•47086	10
11•4	•0877	1•70528	8	1•60120	9	1•54016	10
11•5	•0870	1•75936	8	1•66311	9	1•61105	10
11•6	•0862	1•81367	8	1•72584	9	1•68350	10
11•7	•0855	1•86816	8	1•78933	9	1•75747	10
11•8	•0847	1•92280	8	1•85353	9	1•83290	10
11•9	•0840	1•97753	8	1•91838	9	1•90975	10
12•0	•0833	2•03231	8	1•98384	9	1•98797	10
12•1	•0826	2•08708	8	2•04984	9	2•06751	10
12•2	•0820	2•14181	8	2•11634	9	2•14830	10
12•3	•0813	2•19645	8	2•18328	9	2•23030	10
12•4	•0806	2•25096	8	2•25059	9	2•31344	10
12•5	•0800	2•30529	8	2•31824	9	2•39765	10
12•6	•0794	2•35941	8	2•38615	9	2•48288	10
12•7	•0787	2•41326	8	2•45428	9	2•56907	10
12•8	•0781	2•46683	8	2•52257	9	2•65614	10
12•9	•0775	2•52006	8	2•59097	9	2•74403	10
13•0	•0769	2•57291	8	2•65942	9	2•83268	10
13•1	•0763	2•62537	8	2•72787	9	2•92201	10
13•2	•0758	2•67738	8	2•79627	9	3•01195	10
13•3	•0752	2•72893	8	2•86457	9	3•10244	10
13•4	•0746	2•77997	8	2•93271	9	3•19341	10
13•5	•0741	2•83048	8	3•00065	9	3•28479	10
13•6	•0735	2•88044	8	3•06834	9	3•37651	10
13•7	•0730	2•92981	8	3•13573	9	3•46849	10
13•8	•0725	2•97857	8	3•20277	9	3•56068	10
13•9	•0719	3•02670	8	3•26943	9	3•65300	10
14•0	•0714	3•07417	8	3•33566	9	3•74539	10
14•1	•0709	3•12098	8	3•40142	9	3•83778	10
14•2	•0704	3•16709	8	3•46666	9	3•93010	10
14•3	•0699	3•21249	8	3•53136	9	4•02230	10
14•4	•0694	3•25717	8	3•59547	9	4•11430	10
14•5	•0690	3•30111	8	3•65896	9	4•20604	10
14•6	•0685	3•34429	8	3•72180	9	4•29747	10
14•7	•0680	3•38672	8	3•78396	9	4•38853	10
14•8	•0676	3•42837	8	3•84540	9	4•47915	10
14•9	•0671	3•46925	8	3•90609	9	4•56928	10
15•0	•0667	3•50933	8	3•96602	9	4•65887	10

TABLE 7.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14 (con't.)

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
15•1	•0662	3•54863	8	4•02515	9	4•74787	10
15•2	•0658	3•58712	8	4•08347	9	4•83622	10
15•3	•0654	3•62481	8	4•14095	9	4•92387	10
15•4	•0649	3•66170	8	4•19757	9	5•01079	10
15•5	•0645	3•69778	8	4•25332	9	5•09691	10
15•6	•0641	3•73306	8	4•30817	9	5•18221	10
15•7	•0637	3•76753	8	4•36212	9	5•26664	10
15•8	•0633	3•80120	8	4•41515	9	5•35016	10
15•9	•0629	3•83407	8	4•46724	9	5•43273	10
16•0	•0625	3•86614	8	4•51840	9	5•51432	10
16•1	•0621	3•89742	8	4•56860	9	5•59490	10
16•2	•0617	3•92791	8	4•61785	9	5•67443	10
16•3	•0613	3•95763	8	4•66614	9	5•75290	10
16•4	•0610	3•98657	8	4•71345	9	5•83026	10
16•5	•0606	4•01474	8	4•75980	9	5•90650	10
16•6	•0602	4•04216	8	4•80517	9	5•98159	10
16•7	•0599	4•06883	8	4•84957	9	6•05551	10
16•8	•0595	4•09475	8	4•89300	9	6•12825	10
16•9	•0592	4•11995	8	4•93546	9	6•19979	10
17•0	•0588	4•14443	8	4•97694	9	6•27011	10
17•1	•0585	4•16819	8	5•01747	9	6•33920	10
17•2	•0581	4•19126	8	5•05703	9	6•40705	10
17•3	•0578	4•21364	8	5•09564	9	6•47365	10
17•4	•0575	4•23535	8	5•13330	9	6•53899	10
17•5	•0571	4•25640	8	5•17002	9	6•60306	10
17•6	•0568	4•27679	8	5•20581	9	6•66587	10
17•7	•0565	4•29654	8	5•24067	9	6•72741	10
17•8	•0562	4•31567	8	5•27462	9	6•78767	10
17•9	•0559	4•33418	8	5•30767	9	6•84666	10
18•0	•0556	4•35210	8	5•33983	9	6•90438	10
18•1	•0552	4•36943	8	5•37110	9	6•96083	10
18•2	•0549	4•38618	8	5•40151	9	7•01602	10
18•3	•0546	4•40237	8	5•43106	9	7•06994	10
18•4	•0543	4•41801	8	5•45976	9	7•12262	10
18•5	•0541	4•43312	8	5•48764	9	7•17405	10
18•6	•0538	4•44771	8	5•51470	9	7•22424	10
18•7	•0535	4•46179	8	5•54095	9	7•27321	10
18•8	•0532	4•47537	8	5•56642	9	7•32096	10
18•9	•0529	4•48847	8	5•59112	9	7•36751	10
19•0	•0526	4•50110	8	5•61505	9	7•41287	10
19•1	•0524	4•51328	8	5•63825	9	7•45705	10
19•2	•0521	4•52501	8	5•66071	9	7•50007	10
19•3	•0518	4•53631	8	5•68246	9	7•54193	10
19•4	•0515	4•54719	8	5•70351	9	7•58267	10
19•5	•0513	4•55766	8	5•72388	9	7•62228	10
19•6	•0510	4•56774	8	5•74358	9	7•66079	10
19•7	•0508	4•57743	8	5•76262	9	7•69822	10
19•8	•0505	4•58675	8	5•78103	9	7•73458	10
19•9	•0503	4•59571	8	5•79882	9	7•76989	10
20•0	•0500	4•60433	8	5•81601	9	7•80417	10

TABLE 7.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14 (con't.)

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
20.1	.0498	4.61260	8	5.83260	9	7.83744	10
20.2	.0495	4.62055	8	5.84861	9	7.86971	10
20.3	.0493	4.62818	8	5.86407	9	7.90101	10
20.4	.0490	4.63551	8	5.87898	9	7.93135	10
20.5	.0488	4.64254	8	5.89336	9	7.96075	10
20.6	.0485	4.64929	8	5.90722	9	7.98924	10
20.7	.0483	4.65576	8	5.92058	9	8.01683	10
20.8	.0481	4.66196	8	5.93345	9	8.04353	10
20.9	.0478	4.66791	8	5.94585	9	8.06938	10
21.0	.0476	4.67360	8	5.95779	9	8.09440	10
21.1	.0474	4.67906	8	5.96928	9	8.11859	10
21.2	.0472	4.68429	8	5.98034	9	8.14198	10
21.3	.0469	4.68930	8	5.99098	9	8.16458	10
21.4	.0467	4.69409	8	6.00121	9	8.18643	10
21.5	.0465	4.69868	8	6.01105	9	8.20754	10
21.6	.0463	4.70307	8	6.02051	9	8.22792	10
21.7	.0461	4.70727	8	6.02960	9	8.24760	10
21.8	.0459	4.71128	8	6.03833	9	8.26659	10
21.9	.0457	4.71512	8	6.04672	9	8.28491	10
22.0	.0455	4.71879	8	6.05477	9	8.30258	10
22.1	.0452	4.72229	8	6.06250	9	8.31963	10
22.2	.0450	4.72564	8	6.06991	9	8.33606	10
22.3	.0448	4.72884	8	6.07703	9	8.35189	10
22.4	.0446	4.73190	8	6.08386	9	8.36715	10
22.5	.0444	4.73481	8	6.09040	9	8.38184	10
22.6	.0442	4.73759	8	6.09668	9	8.39599	10
22.7	.0441	4.74025	8	6.10269	9	8.40961	10
22.8	.0439	4.74278	8	6.10845	9	8.42272	10
22.9	.0437	4.74520	8	6.11397	9	8.43533	10
23.0	.0435	4.74750	8	6.11926	9	8.44746	10
23.1	.0433	4.74970	8	6.12432	9	8.45913	10
23.2	.0431	4.75179	8	6.12917	9	8.47034	10
23.3	.0429	4.75378	8	6.13380	9	8.48112	10
23.4	.0427	4.75568	8	6.13824	9	8.49148	10
23.5	.0426	4.75749	8	6.14248	9	8.50143	10
23.6	.0424	4.75922	8	6.14654	9	8.51099	10
23.7	.0422	4.76086	8	6.15042	9	8.52016	10
23.8	.0420	4.76242	8	6.15413	9	8.52897	10
23.9	.0418	4.76390	8	6.15767	9	8.53742	10
24.0	.0417	4.76532	8	6.16106	9	8.54553	10
24.1	.0415	4.76666	8	6.16429	9	8.55331	10
24.2	.0413	4.76794	8	6.16738	9	8.56077	10
24.3	.0412	4.76916	8	6.17033	9	8.56792	10
24.4	.0410	4.77031	8	6.17314	9	8.57477	10
24.5	.0408	4.77141	8	6.17583	9	8.58134	10
24.6	.0407	4.77246	8	6.17839	9	8.58763	10
24.7	.0405	4.77345	8	6.18084	9	8.59366	10
24.8	.0403	4.77439	8	6.18317	9	8.59943	10
24.9	.0402	4.77528	8	6.18539	9	8.60495	10
25.0	.0400	4.77613	8	6.18751	9	8.61024	10

TABLE 7.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14 (con't.)

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
25.1	.0398	4.77694	8	6.18953	9	8.61530	10
25.2	.0397	4.77771	8	6.19146	9	8.62015	10
25.3	.0395	4.77843	8	6.19329	9	8.62478	10
25.4	.0394	4.77912	8	6.19504	9	8.62921	10
25.5	.0392	4.77978	8	6.19670	9	8.63344	10
25.6	.0391	4.78040	8	6.19829	9	8.63749	10
25.7	.0389	4.78098	8	6.19980	9	8.64136	10
25.8	.0388	4.78154	8	6.20123	9	8.64506	10
25.9	.0386	4.78207	8	6.20260	9	8.64859	10
26.0	.0385	4.78257	8	6.20390	9	8.65196	10
26.1	.0383	4.78305	8	6.20513	9	8.65518	10
26.2	.0382	4.78350	8	6.20631	9	8.65826	10
26.3	.0380	4.78392	8	6.20743	9	8.66119	10
26.4	.0379	4.78433	8	6.20849	9	8.66399	10
26.5	.0377	4.78471	8	6.20950	9	8.66667	10
26.6	.0376	4.78507	8	6.21046	9	8.66922	10
26.7	.0375	4.78541	8	6.21137	9	8.67165	10
26.8	.0373	4.78574	8	6.21224	9	8.67397	10
26.9	.0372	4.78604	8	6.21306	9	8.67618	10
27.0	.0370	4.78633	8	6.21385	9	8.67828	10
27.1	.0369	4.78661	8	6.21459	9	8.68029	10
27.2	.0368	4.78687	8	6.21529	9	8.68220	10
27.3	.0366	4.78711	8	6.21596	9	8.68403	10
27.4	.0365	4.78734	8	6.21660	9	8.68576	10
27.5	.0364	4.78756	8	6.21720	9	8.68742	10
27.6	.0362	4.78777	8	6.21777	9	8.68899	10
27.7	.0361	4.78797	8	6.21831	9	8.69049	10
27.8	.0360	4.78815	8	6.21883	9	8.69191	10
27.9	.0358	4.78833	8	6.21931	9	8.69327	10
28.0	.0357	4.78849	8	6.21977	9	8.69456	10
28.1	.0356	4.78865	8	6.22021	9	8.69579	10
28.2	.0355	4.78879	8	6.22063	9	8.69696	10
28.3	.0353	4.78893	8	6.22102	9	8.69807	10
28.4	.0352	4.78907	8	6.22139	9	8.69912	10
28.5	.0351	4.78919	8	6.22175	9	8.70013	10
28.6	.0350	4.78931	8	6.22208	9	8.70108	10
28.7	.0348	4.78942	8	6.22240	9	8.70199	10
28.8	.0347	4.78952	8	6.22270	9	8.70285	10
28.9	.0346	4.78962	8	6.22298	9	8.70366	10
29.0	.0345	4.78971	8	6.22325	9	8.70444	10
29.1	.0344	4.78980	8	6.22350	9	8.70518	10
29.2	.0342	4.78988	8	6.22374	9	8.70588	10
29.3	.0341	4.78996	8	6.22397	9	8.70654	10
29.4	.0340	4.79003	8	6.22418	9	8.70717	10
29.5	.0339	4.79010	8	6.22439	9	8.70777	10
29.6	.0338	4.79017	8	6.22458	9	8.70834	10
29.7	.0337	4.79023	8	6.22476	9	8.70888	10
29.8	.0336	4.79029	8	6.22493	9	8.70939	10
29.9	.0334	4.79034	8	6.22510	9	8.70988	10
30.0	.0333	4.79039	8	6.22525	9	8.71034	10

TABLE 7.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14 (con't.)

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
30.1	.0332	4.79044	8	6.22539	9	8.71077	10
30.2	.0331	4.79049	8	6.22553	9	8.71119	10
30.3	.0330	4.79053	8	6.22566	9	8.71158	10
30.4	.0329	4.79057	8	6.22578	9	8.71195	10
30.5	.0328	4.79061	8	6.22590	9	8.71230	10
30.6	.0327	4.79064	8	6.22601	9	8.71263	10
30.7	.0326	4.79068	8	6.22611	9	8.71295	10
30.8	.0325	4.79071	8	6.22621	9	8.71325	10
30.9	.0324	4.79074	8	6.22630	9	8.71353	10
31.0	.0323	4.79076	8	6.22639	9	8.71380	10
31.1	.0322	4.79079	8	6.22647	9	8.71405	10
31.2	.0321	4.79082	8	6.22654	9	8.71429	10
31.3	.0319	4.79084	8	6.22662	9	8.71452	10
31.4	.0318	4.79086	8	6.22669	9	8.71473	10
31.5	.0317	4.79088	8	6.22675	9	8.71494	10
31.6	.0316	4.79090	8	6.22681	9	8.71513	10
31.7	.0315	4.79092	8	6.22687	9	8.71531	10
31.8	.0314	4.79094	8	6.22692	9	8.71548	10
31.9	.0313	4.79095	8	6.22697	9	8.71565	10
32.0	.0313	4.79097	8	6.22702	9	8.71580	10
32.1	.0312	4.79098	8	6.22707	9	8.71594	10
32.2	.0311	4.79099	8	6.22711	9	8.71608	10
32.3	.0310	4.79101	8	6.22715	9	8.71621	10
32.4	.0309	4.79102	8	6.22719	9	8.71633	10
32.5	.0308	4.79103	8	6.22722	9	8.71645	10
32.6	.0307	4.79104	8	6.22726	9	8.71656	10
32.7	.0306	4.79105	8	6.22729	9	8.71666	10
32.8	.0305	4.79106	8	6.22732	9	8.71676	10
32.9	.0304	4.79107	8	6.22735	9	8.71685	10
33.0	.0303	4.79108	8	6.22737	9	8.71694	10
33.1	.0302	4.79108	8	6.22740	9	8.71702	10
33.2	.0301	4.79109	8	6.22742	9	8.71710	10
33.3	.0300	4.79110	8	6.22744	9	8.71717	10
33.4	.0299	4.79110	8	6.22746	9	8.71724	10
33.5	.0299	4.79111	8	6.22748	9	8.71731	10
33.6	.0298	4.79111	8	6.22750	9	8.71737	10
33.7	.0297	4.79112	8	6.22752	9	8.71743	10
33.8	.0296	4.79112	8	6.22754	9	8.71748	10
33.9	.0295	4.79113	8	6.22755	9	8.71753	10
34.0	.0294	4.79113	8	6.22757	9	8.71758	10
34.1	.0293	4.79114	8	6.22758	9	8.71763	10
34.2	.0292	4.79114	8	6.22759	9	8.71767	10
34.3	.0292	4.79114	8	6.22760	9	8.71771	10
34.4	.0291	4.79115	8	6.22761	9	8.71775	10
34.5	.0290	4.79115	8	6.22763	9	8.71779	10
34.6	.0289	4.79115	8	6.22764	9	8.71782	10
34.7	.0288	4.79116	8	6.22764	9	8.71785	10
34.8	.0287	4.79116	8	6.22765	9	8.71788	10
34.9	.0287	4.79116	8	6.22766	9	8.71791	10
35.0	.0286	4.79116	8	6.22767	9	8.71794	10

TABLE 7.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 12, 13, 14 (con't.)

x	1/x	$J_{12}(x)$		$J_{13}(x)$		$J_{14}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
35.1	.0285	4.79117	8	6.22768	9	8.71796	10
35.2	.0284	4.79117	8	6.22768	9	8.71799	10
35.3	.0283	4.79117	8	6.22769	9	8.71801	10
35.4	.0282	4.79117	8	6.22770	9	8.71803	10
35.5	.0282	4.79117	8	6.22770	9	8.71805	10
35.6	.0281	4.79117	8	6.22771	9	8.71807	10
35.7	.0280	4.79118	8	6.22771	9	8.71809	10
35.8	.0279	4.79118	8	6.22772	9	8.71811	10
35.9	.0279	4.79118	8	6.22772	9	8.71812	10
36.0	.0278	4.79118	8	6.22772	9	8.71814	10
36.1	.0277	4.79118	8	6.22773	9	8.71815	10
36.2	.0276	4.79118	8	6.22773	9	8.71816	10
36.3	.0275	4.79118	8	6.22774	9	8.71817	10
36.4	.0275	4.79118	8	6.22774	9	8.71819	10
36.5	.0274	4.79118	8	6.22774	9	8.71820	10
36.6	.0273	4.79118	8	6.22774	9	8.71821	10
36.7	.0272	4.79118	8	6.22775	9	8.71822	10
36.8	.0272	4.79119	8	6.22775	9	8.71823	10
36.9	.0271	4.79119	8	6.22775	9	8.71823	10
37.0	.0270	4.79119	8	6.22775	9	8.71824	10
37.1	.0270	4.79119	8	6.22776	9	8.71825	10
37.2	.0269	4.79119	8	6.22776	9	8.71826	10
37.3	.0268	4.79119	8	6.22776	9	8.71826	10
37.4	.0267	4.79119	8	6.22776	9	8.71827	10
37.5	.0267	4.79119	8	6.22776	9	8.71827	10
37.6	.0266	4.79119	8	6.22776	9	8.71828	10
37.7	.0265	4.79119	8	6.22777	9	8.71829	10
37.8	.0265	4.79119	8	6.22777	9	8.71829	10
37.9	.0264	4.79119	8	6.22777	9	8.71829	10
38.0	.0263	4.79119	8	6.22777	9	8.71830	10
38.1	.0262	4.79119	8	6.22777	9	8.71830	10
38.2	.0262	4.79119	8	6.22777	9	8.71831	10
38.3	.0261	4.79119	8	6.22777	9	8.71831	10
38.4	.0260	4.79119	8	6.22777	9	8.71831	10
38.5	.0260	4.79119	8	6.22777	9	8.71832	10
38.6	.0259	4.79119	8	6.22777	9	8.71832	10
38.7	.0258	4.79119	8	6.22777	9	8.71832	10
38.8	.0258	4.79119	8	6.22778	9	8.71832	10
38.9	.0257	4.79119	8	6.22778	9	8.71833	10
39.0	.0256	4.79119	8	6.22778	9	8.71833	10
39.1	.0256	4.79119	8	6.22778	9	8.71833	10
39.2	.0255	4.79119	8	6.22778	9	8.71833	10
39.3	.0254	4.79119	8	6.22778	9	8.71834	10
39.4	.0254	4.79119	8	6.22778	9	8.71834	10
39.5	.0253	4.79119	8	6.22778	9	8.71834	10
39.6	.0253	4.79119	8	6.22778	9	8.71834	10
39.7	.0252	4.79119	8	6.22778	9	8.71834	10
39.8	.0251	4.79119	8	6.22778	9	8.71834	10
39.9	.0251	4.79119	8	6.22778	9	8.71834	10
40.0	.0250	4.79119	8	6.22778	9	8.71835	10

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; $n = 15, 16, 17$

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
.1	10.0000	7.13765	-16	6.66177	-17	6.24537	-18
.2	5.0000	1.16688	-11	2.17812	-12	4.08389	-13
.3	3.3333	3.39408	- 9	9.50289	-10	2.67256	-10
.4	2.5000	1.89518	- 7	7.07466	- 8	2.65277	- 8
.5	2.0000	4.28106	- 6	1.99752	- 6	9.36211	- 7
.6	1.6667	5.45283	- 5	3.05291	- 5	1.71693	- 5
.7	1.4286	4.67507	- 4	3.05346	- 4	2.00330	- 4
.8	1.2500	2.99894	- 3	2.23833	- 3	1.67817	- 3
.9	1.1111	1.54092	- 2	1.29374	- 2	1.09111	- 2
1.0	1.0000	6.64437	- 2	6.19764	- 2	5.80714	- 2
1.1	.9091	2.48551	- 1	2.54992	- 1	2.62788	- 1
1.2	.8333	8.26651	- 1	9.25039	- 1	1.03986	0
1.3	.7692	2.49038	0	3.01857	0	3.67553	0
1.4	.7143	6.89510	0	8.99891	0	1.17986	1
1.5	.6667	1.77475	1	2.48127	1	3.48508	1
1.6	.6250	4.28628	1	6.39096	1	9.57331	1
1.7	.5882	9.78733	1	1.55022	2	2.46685	2
1.8	.5556	2.12627	2	3.56519	2	6.00586	2
1.9	.5263	4.41807	2	7.81777	2	1.38987	3
2.0	.5000	8.81951	2	1.64237	3	3.07291	3
2.1	.4762	1.69789	3	3.31910	3	6.51924	3
2.2	.4545	3.16265	3	6.47528	3	1.33211	4
2.3	.4348	5.71623	3	1.22323	4	2.63025	4
2.4	.4167	1.00499	4	2.24351	4	5.03264	4
2.5	.4000	1.72252	4	4.00438	4	9.35456	4
2.6	.3846	2.88368	4	6.96988	4	1.69291	5
2.7	.3704	4.72345	4	1.18522	5	2.98870	5
2.8	.3571	7.58167	4	1.97225	5	5.15610	5
2.9	.3448	1.19415	5	3.21632	5	8.70632	5
3.0	.3333	1.84792	5	5.14707	5	1.44090	6
3.1	.3226	2.81264	5	8.09253	5	2.34028	6
3.2	.3125	4.21498	5	1.25142	6	3.73456	6
3.3	.3030	6.22480	5	1.90520	6	5.86145	6
3.4	.2941	9.06713	5	2.85819	6	9.05688	6
3.5	.2857	1.30365	6	4.22871	6	1.37892	7
3.6	.2778	1.85143	6	6.17475	6	2.07033	7
3.7	.2703	2.59888	6	8.90488	6	3.06758	7
3.8	.2632	3.60797	6	1.26914	7	4.48855	7
3.9	.2564	4.95649	6	1.78864	7	6.48996	7
4.0	.2500	6.74128	6	2.49405	7	9.27808	7
4.1	.2439	9.08189	6	3.44251	7	1.31217	8
4.2	.2381	1.21246	7	4.70587	7	1.83676	8
4.3	.2326	1.60469	7	6.37369	7	2.54596	8
4.4	.2273	2.10630	7	8.55669	7	3.49605	8
4.5	.2222	2.74289	7	1.13907	8	4.75781	8
4.6	.2174	3.54487	7	1.50413	8	6.41957	8
4.7	.2128	4.54817	7	1.97085	8	8.59074	8
4.8	.2083	5.79487	7	2.56325	8	1.14058	9
4.9	.2041	7.33406	7	3.31003	8	1.50291	9
5.0	.2000	9.22258	7	4.24516	8	1.96597	9

TABLE 8.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 15, 16, 17 (con't.)

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
5.1	.1961	1.15259	8	5.40872	8	2.55378	9
5.2	.1923	1.43191	8	6.84765	8	3.29508	9
5.3	.1887	1.76876	8	8.61662	8	4.22409	9
5.4	.1852	2.17282	8	1.07790	9	5.38131	9
5.5	.1818	2.65504	8	1.34078	9	6.81442	9
5.6	.1786	3.22767	8	1.65867	9	8.57922	9
5.7	.1754	3.90443	8	2.04113	9	1.07407	10
5.8	.1724	4.70055	8	2.49900	9	1.33741	10
5.9	.1695	5.63290	8	3.04455	9	1.65664	10
6.0	.1667	6.72010	8	3.69157	9	2.04171	10
6.1	.1639	7.98256	8	4.45552	9	2.50400	10
6.2	.1613	9.44263	8	5.35363	9	3.05646	10
6.3	.1587	1.11246	9	6.40506	9	3.71374	10
6.4	.1563	1.30549	9	7.63101	9	4.49237	10
6.5	.1538	1.52620	9	9.05484	9	5.41091	10
6.6	.1515	1.77766	9	1.07022	10	6.49012	10
6.7	.1493	2.06316	9	1.26011	10	7.75312	10
6.8	.1471	2.38624	9	1.47821	10	9.22557	10
6.9	.1449	2.75062	9	1.72785	10	1.09359	11
7.0	.1429	3.16030	9	2.01262	10	1.29153	11
7.1	.1408	3.61949	9	2.33639	10	1.51982	11
7.2	.1389	4.13262	9	2.70333	10	1.78222	11
7.3	.1370	4.70437	9	3.11790	10	2.08283	11
7.4	.1351	5.33963	9	3.58487	10	2.42610	11
7.5	.1333	6.04350	9	4.10931	10	2.81686	11
7.6	.1316	6.82130	9	4.69661	10	3.26032	11
7.7	.1299	7.67854	9	5.35247	10	3.76211	11
7.8	.1282	8.62093	9	6.08289	10	4.32826	11
7.9	.1266	9.65435	9	6.89421	10	4.96521	11
8.0	.1250	1.07849	10	7.79304	10	5.67986	11
8.1	.1235	1.20186	10	8.78632	10	6.47951	11
8.2	.1220	1.33620	10	9.88128	10	7.37198	11
8.3	.1205	1.48215	10	1.10854	11	8.36549	11
8.4	.1190	1.64035	10	1.24065	11	9.46872	11
8.5	.1176	1.81148	10	1.38526	11	1.06908	12
8.6	.1163	1.99619	10	1.54321	11	1.20414	12
8.7	.1149	2.19517	10	1.71534	11	1.35304	12
8.8	.1136	2.40908	10	1.90252	11	1.51684	12
8.9	.1124	2.63860	10	2.10566	11	1.69663	12
9.0	.1111	2.88439	10	2.32566	11	1.89355	12
9.1	.1099	3.14712	10	2.56345	11	2.10876	12
9.2	.1087	3.42744	10	2.81996	11	2.34348	12
9.3	.1075	3.72600	10	3.09613	11	2.59896	12
9.4	.1064	4.04342	10	3.39294	11	2.87649	12
9.5	.1053	4.38031	10	3.71132	11	3.17738	12
9.6	.1042	4.73728	10	4.05224	11	3.50298	12
9.7	.1031	5.11490	10	4.41666	11	3.85466	12
9.8	.1020	5.51371	10	4.80552	11	4.23382	12
9.9	.1010	5.93425	10	5.21977	11	4.64188	12
10.0	.1000	6.37702	10	5.66035	11	5.08028	12

TABLE 8.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 15, 16, 17 (con't.)

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
10•1	•0990	6•84248	10	6•12815	11	5•55041	12
10•2	•0980	7•33109	10	6•62409	11	6•05381	12
10•3	•0971	7•84323	10	7•14906	11	6•59193	12
10•4	•0962	8•37925	10	7•70387	11	7•16619	12
10•5	•0952	8•93953	10	8•28938	11	7•77807	12
10•6	•0943	9•52434	10	8•90638	11	8•42905	12
10•7	•0935	1•01339	11	9•55563	11	9•12053	12
10•8	•0926	1•07685	11	1•02378	12	9•85389	12
10•9	•0917	1•14283	11	1•09536	12	1•06306	13
11•0	•0909	1•21133	11	1•17038	12	1•14520	13
11•1	•0901	1•28237	11	1•24888	12	1•23195	13
11•2	•0893	1•35594	11	1•33092	12	1•32342	13
11•3	•0885	1•43206	11	1•41655	12	1•41977	13
11•4	•0877	1•51071	11	1•50582	12	1•52109	13
11•5	•0870	1•59189	11	1•59877	12	1•62752	13
11•6	•0862	1•67557	11	1•69542	12	1•73916	13
11•7	•0855	1•76174	11	1•79581	12	1•85612	13
11•8	•0847	1•85038	11	1•89996	12	1•97850	13
11•9	•0840	1•94145	11	2•00789	12	2•10639	13
12•0	•0833	2•03492	11	2•11959	12	2•23988	13
12•1	•0826	2•13077	11	2•23508	12	2•37905	13
12•2	•0820	2•22893	11	2•35436	12	2•52397	13
12•3	•0813	2•32938	11	2•47740	12	2•67470	13
12•4	•0806	2•43205	11	2•60421	12	2•83131	13
12•5	•0800	2•53690	11	2•73475	12	2•99383	13
12•6	•0794	2•64387	11	2•86900	12	3•16232	13
12•7	•0787	2•75289	11	3•00691	12	3•33679	13
12•8	•0781	2•86391	11	3•14846	12	3•51727	13
12•9	•0775	2•97685	11	3•29359	12	3•70376	13
13•0	•0769	3•09165	11	3•44225	12	3•89628	13
13•1	•0763	3•20822	11	3•59438	12	4•09482	13
13•2	•0758	3•32650	11	3•74992	12	4•29935	13
13•3	•0752	3•44640	11	3•90879	12	4•50986	13
13•4	•0746	3•56784	11	4•07092	12	4•72630	13
13•5	•0741	3•69075	11	4•23623	12	4•94864	13
13•6	•0735	3•81502	11	4•40462	12	5•17682	13
13•7	•0730	3•94059	11	4•57602	12	5•41077	13
13•8	•0725	4•06734	11	4•75031	12	5•65043	13
13•9	•0719	4•19521	11	4•92741	12	5•89571	13
14•0	•0714	4•32409	11	5•10720	12	6•14652	13
14•1	•0709	4•45390	11	5•28958	12	6•40276	13
14•2	•0704	4•58454	11	5•47443	12	6•66433	13
14•3	•0699	4•71591	11	5•66164	12	6•93111	13
14•4	•0694	4•84793	11	5•85109	12	7•20297	13
14•5	•0690	4•98050	11	6•04266	12	7•47978	13
14•6	•0685	5•11353	11	6•23621	12	7•76141	13
14•7	•0680	5•24693	11	6•43164	12	8•04771	13
14•8	•0676	5•38060	11	6•62879	12	8•33852	13
14•9	•0671	5•51444	11	6•82756	12	8•63369	13
15•0	•0667	5•64838	11	7•02780	12	8•93305	13

TABLE 8.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 15, 16, 17 (con't.)

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
15.1	.0662	5.78232	11	7.22937	12	9.23642	13
15.2	.0658	5.91617	11	7.43216	12	9.54363	13
15.3	.0654	6.04984	11	7.63601	12	9.85451	13
15.4	.0649	6.18325	11	7.84080	12	1.01689	14
15.5	.0645	6.31632	11	8.04638	12	1.04865	14
15.6	.0641	6.44896	11	8.25263	12	1.08072	14
15.7	.0637	6.58109	11	8.45941	12	1.11308	14
15.8	.0633	6.71263	11	8.66659	12	1.14571	14
15.9	.0629	6.84350	11	8.87403	12	1.17859	14
16.0	.0625	6.97364	11	9.08160	12	1.21170	14
16.1	.0621	7.10297	11	9.28916	12	1.24501	14
16.2	.0617	7.23141	11	9.49661	12	1.27852	14
16.3	.0613	7.35891	11	9.70379	12	1.31218	14
16.4	.0610	7.48540	11	9.91060	12	1.34600	14
16.5	.0606	7.61081	11	1.01169	13	1.37993	14
16.6	.0602	7.73509	11	1.03226	13	1.41397	14
16.7	.0599	7.85817	11	1.05275	13	1.44809	14
16.8	.0595	7.98001	11	1.07316	13	1.48228	14
16.9	.0592	8.10055	11	1.09347	13	1.51650	14
17.0	.0588	8.21974	11	1.11367	13	1.55074	14
17.1	.0585	8.33754	11	1.13376	13	1.58499	14
17.2	.0581	8.45390	11	1.15371	13	1.61921	14
17.3	.0578	8.56878	11	1.17353	13	1.65339	14
17.4	.0575	8.68214	11	1.19320	13	1.68752	14
17.5	.0571	8.79396	11	1.21271	13	1.72157	14
17.6	.0568	8.90418	11	1.23205	13	1.75552	14
17.7	.0565	9.01279	11	1.25122	13	1.78935	14
17.8	.0562	9.11976	11	1.27021	13	1.82305	14
17.9	.0559	9.22505	11	1.28900	13	1.85660	14
18.0	.0556	9.32866	11	1.30760	13	1.88998	14
18.1	.0552	9.43055	11	1.32599	13	1.92318	14
18.2	.0549	9.53071	11	1.34417	13	1.95617	14
18.3	.0546	9.62913	11	1.36213	13	1.98895	14
18.4	.0543	9.72578	11	1.37987	13	2.02150	14
18.5	.0541	9.82067	11	1.39738	13	2.05380	14
18.6	.0538	9.91378	11	1.41465	13	2.08583	14
18.7	.0535	1.00051	12	1.43168	13	2.11760	14
18.8	.0532	1.00946	12	1.44847	13	2.14908	14
18.9	.0529	1.01824	12	1.46501	13	2.18025	14
19.0	.0526	1.02683	12	1.48129	13	2.21112	14
19.1	.0524	1.03525	12	1.49733	13	2.24166	14
19.2	.0521	1.04349	12	1.51310	13	2.27187	14
19.3	.0518	1.05155	12	1.52862	13	2.30173	14
19.4	.0515	1.05943	12	1.54387	13	2.33124	14
19.5	.0513	1.06713	12	1.55885	13	2.36039	14
19.6	.0510	1.07466	12	1.57357	13	2.38917	14
19.7	.0508	1.08202	12	1.58802	13	2.41756	14
19.8	.0505	1.08920	12	1.60221	13	2.44557	14
19.9	.0503	1.09621	12	1.61612	13	2.47319	14
20.0	.0500	1.10305	12	1.62976	13	2.50041	14

TABLE 8.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 15, 16, 17 (con't.)

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
20•1	•0498	1•10972	12	1•64314	13	2•52722	14
20•2	•0495	1•11622	12	1•65624	13	2•55362	14
20•3	•0493	1•12256	12	1•66907	13	2•57961	14
20•4	•0490	1•12873	12	1•68164	13	2•60518	14
20•5	•0488	1•13474	12	1•69393	13	2•63032	14
20•6	•0485	1•14060	12	1•70596	13	2•65504	14
20•7	•0483	1•14629	12	1•71772	13	2•67934	14
20•8	•0481	1•15184	12	1•72922	13	2•70320	14
20•9	•0478	1•15723	12	1•74046	13	2•72663	14
21•0	•0476	1•16247	12	1•75144	13	2•74962	14
21•1	•0474	1•16756	12	1•76216	13	2•77219	14
21•2	•0472	1•17250	12	1•77262	13	2•79431	14
21•3	•0469	1•17731	12	1•78283	13	2•81601	14
21•4	•0467	1•18197	12	1•79279	13	2•83727	14
21•5	•0465	1•18650	12	1•80250	13	2•85810	14
21•6	•0463	1•19089	12	1•81196	13	2•87849	14
21•7	•0461	1•19515	12	1•82118	13	2•89846	14
21•8	•0459	1•19928	12	1•83017	13	2•91800	14
21•9	•0457	1•20329	12	1•83892	13	2•93711	14
22•0	•0455	1•20717	12	1•84743	13	2•95580	14
22•1	•0452	1•21092	12	1•85572	13	2•97407	14
22•2	•0450	1•21456	12	1•86378	13	2•99193	14
22•3	•0448	1•21809	12	1•87162	13	3•00937	14
22•4	•0446	1•22149	12	1•87924	13	3•02640	14
22•5	•0444	1•22479	12	1•88664	13	3•04303	14
22•6	•0442	1•22798	12	1•89384	13	3•05925	14
22•7	•0441	1•23107	12	1•90082	13	3•07508	14
22•8	•0439	1•23405	12	1•90761	13	3•09051	14
22•9	•0437	1•23693	12	1•91419	13	3•10556	14
23•0	•0435	1•23972	12	1•92058	13	3•12022	14
23•1	•0433	1•24241	12	1•92678	13	3•13451	14
23•2	•0431	1•24500	12	1•93279	13	3•14842	14
23•3	•0429	1•24751	12	1•93862	13	3•16197	14
23•4	•0427	1•24993	12	1•94427	13	3•17516	14
23•5	•0426	1•25226	12	1•94974	13	3•18799	14
23•6	•0424	1•25451	12	1•95504	13	3•20047	14
23•7	•0422	1•25668	12	1•96017	13	3•21260	14
23•8	•0420	1•25877	12	1•96514	13	3•22440	14
23•9	•0418	1•26079	12	1•96994	13	3•23586	14
24•0	•0417	1•26273	12	1•97459	13	3•24700	14
24•1	•0415	1•26460	12	1•97909	13	3•25782	14
24•2	•0413	1•26640	12	1•98344	13	3•26833	14
24•3	•0412	1•26814	12	1•98765	13	3•27852	14
24•4	•0410	1•26981	12	1•99171	13	3•28842	14
24•5	•0408	1•27141	12	1•99564	13	3•29802	14
24•6	•0407	1•27296	12	1•99943	13	3•30733	14
24•7	•0405	1•27444	12	2•00309	13	3•31636	14
24•8	•0403	1•27587	12	2•00663	13	3•32511	14
24•9	•0402	1•27724	12	2•01004	13	3•33358	14
25•0	•0400	1•27856	12	2•01333	13	3•34180	14

TABLE 8.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 15, 16, 17 (con't.)

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
25.1	.0398	1.27983	12	2.01651	13	3.34975	14
25.2	.0397	1.28105	12	2.01957	13	3.35746	14
25.3	.0395	1.28222	12	2.02252	13	3.36491	14
25.4	.0394	1.28334	12	2.02537	13	3.37213	14
25.5	.0392	1.28442	12	2.02811	13	3.37911	14
25.6	.0391	1.28545	12	2.03076	13	3.38586	14
25.7	.0389	1.28645	12	2.03330	13	3.39239	14
25.8	.0388	1.28740	12	2.03575	13	3.39870	14
25.9	.0386	1.28831	12	2.03811	13	3.40480	14
26.0	.0385	1.28919	12	2.04038	13	3.41070	14
26.1	.0383	1.29002	12	2.04257	13	3.41639	14
26.2	.0382	1.29083	12	2.04467	13	3.42189	14
26.3	.0380	1.29160	12	2.04669	13	3.42720	14
26.4	.0379	1.29234	12	2.04864	13	3.43232	14
26.5	.0377	1.29304	12	2.05051	13	3.43727	14
26.6	.0376	1.29372	12	2.05231	13	3.44204	14
26.7	.0375	1.29437	12	2.05403	13	3.44664	14
26.8	.0373	1.29499	12	2.05569	13	3.45108	14
26.9	.0372	1.29558	12	2.05729	13	3.45536	14
27.0	.0370	1.29615	12	2.05882	13	3.45948	14
27.1	.0369	1.29669	12	2.06028	13	3.46345	14
27.2	.0368	1.29721	12	2.06169	13	3.46728	14
27.3	.0366	1.29771	12	2.06305	13	3.47097	14
27.4	.0365	1.29818	12	2.06435	13	3.47452	14
27.5	.0364	1.29864	12	2.06559	13	3.47794	14
27.6	.0362	1.29907	12	2.06679	13	3.48123	14
27.7	.0361	1.29949	12	2.06793	13	3.48440	14
27.8	.0360	1.29988	12	2.06903	13	3.48744	14
27.9	.0358	1.30026	12	2.07008	13	3.49037	14
28.0	.0357	1.30062	12	2.07109	13	3.49319	14
28.1	.0356	1.30096	12	2.07206	13	3.49590	14
28.2	.0355	1.30129	12	2.07298	13	3.49851	14
28.3	.0353	1.30161	12	2.07387	13	3.50101	14
28.4	.0352	1.30191	12	2.07472	13	3.50341	14
28.5	.0351	1.30219	12	2.07553	13	3.50572	14
28.6	.0350	1.30246	12	2.07631	13	3.50794	14
28.7	.0348	1.30272	12	2.07705	13	3.51008	14
28.8	.0347	1.30297	12	2.07776	13	3.51212	14
28.9	.0346	1.30321	12	2.07844	13	3.51409	14
29.0	.0345	1.30343	12	2.07909	13	3.51597	14
29.1	.0344	1.30365	12	2.07971	13	3.51778	14
29.2	.0342	1.30385	12	2.08031	13	3.51951	14
29.3	.0341	1.30404	12	2.08088	13	3.52118	14
29.4	.0340	1.30423	12	2.08142	13	3.52277	14
29.5	.0339	1.30441	12	2.08194	13	3.52430	14
29.6	.0338	1.30457	12	2.08244	13	3.52577	14
29.7	.0337	1.30473	12	2.08291	13	3.52717	14
29.8	.0336	1.30489	12	2.08336	13	3.52852	14
29.9	.0334	1.30503	12	2.08380	13	3.52981	14
30.0	.0333	1.30517	12	2.08421	13	3.53104	14

TABLE 8.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 15, 16, 17 (con't.)

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
30.1	.0332	1.30530	12.	2.08460	13	3.53222	14
30.2	.0331	1.30542	12	2.08498	13	3.53336	14
30.3	.0330	1.30554	12	2.08534	13	3.53444	14
30.4	.0329	1.30565	12	2.08568	13	3.53548	14
30.5	.0328	1.30576	12	2.08600	13	3.53647	14
30.6	.0327	1.30586	12	2.08631	13	3.53742	14
30.7	.0326	1.30596	12	2.08661	13	3.53833	14
30.8	.0325	1.30605	12	2.08689	13	3.53920	14
30.9	.0324	1.30614	12	2.08716	13	3.54003	14
31.0	.0323	1.30622	12	2.08742	13	3.54082	14
31.1	.0322	1.30630	12	2.08766	13	3.54158	14
31.2	.0321	1.30638	12	2.08790	13	3.54231	14
31.3	.0319	1.30645	12	2.08812	13	3.54300	14
31.4	.0318	1.30651	12	2.08833	13	3.54366	14
31.5	.0317	1.30658	12	2.08853	13	3.54429	14
31.6	.0316	1.30664	12	2.08872	13	3.54490	14
31.7	.0315	1.30670	12	2.08890	13	3.54547	14
31.8	.0314	1.30675	12	2.08908	13	3.54603	14
31.9	.0313	1.30680	12	2.08924	13	3.54655	14
32.0	.0313	1.30685	12	2.08940	13	3.54705	14
32.1	.0312	1.30690	12	2.08955	13	3.54753	14
32.2	.0311	1.30694	12	2.08969	13	3.54799	14
32.3	.0310	1.30698	12	2.08983	13	3.54842	14
32.4	.0309	1.30702	12	2.08995	13	3.54884	14
32.5	.0308	1.30706	12	2.09008	13	3.54923	14
32.6	.0307	1.30710	12	2.09019	13	3.54961	14
32.7	.0306	1.30713	12	2.09030	13	3.54997	14
32.8	.0305	1.30716	12	2.09041	13	3.55032	14
32.9	.0304	1.30719	12	2.09051	13	3.55064	14
33.0	.0303	1.30722	12	2.09060	13	3.55095	14
33.1	.0302	1.30725	12	2.09069	13	3.55125	14
33.2	.0301	1.30727	12	2.09078	13	3.55153	14
33.3	.0300	1.30730	12	2.09086	13	3.55180	14
33.4	.0299	1.30732	12	2.09093	13	3.55206	14
33.5	.0299	1.30734	12	2.09101	13	3.55230	14
33.6	.0298	1.30736	12	2.09108	13	3.55254	14
33.7	.0297	1.30738	12	2.09114	13	3.55276	14
33.8	.0296	1.30740	12	2.09120	13	3.55297	14
33.9	.0295	1.30742	12	2.09126	13	3.55317	14
34.0	.0294	1.30744	12	2.09132	13	3.55336	14
34.1	.0293	1.30745	12	2.09137	13	3.55354	14
34.2	.0292	1.30747	12	2.09142	13	3.55371	14
34.3	.0292	1.30748	12	2.09147	13	3.55388	14
34.4	.0291	1.30749	12	2.09152	13	3.55403	14
34.5	.0290	1.30751	12	2.09156	13	3.55418	14
34.6	.0289	1.30752	12	2.09160	13	3.55432	14
34.7	.0288	1.30753	12	2.09164	13	3.55445	14
34.8	.0287	1.30754	12	2.09168	13	3.55458	14
34.9	.0287	1.30755	12	2.09171	13	3.55470	14
35.0	.0286	1.30756	12	2.09174	13	3.55482	14

TABLE 8.—Continued

TRANSPORT INTEGRALS: $J_n(x) \equiv \int_0^x \frac{e^z z^n}{(e^z-1)^2} dz$; n = 15, 16, 17 (con't.)

x	1/x	$J_{15}(x)$		$J_{16}(x)$		$J_{17}(x)$	
		COEF.	EXP.	COEF.	EXP.	COEF.	EXP.
35•1	•0285	1•30757	12	2•09177	13	3•55493	14
35•2	•0284	1•30758	12	2•09180	13	3•55503	14
35•3	•0283	1•30758	12	2•09183	13	3•55513	14
35•4	•0282	1•30759	12	2•09186	13	3•55522	14
35•5	•0282	1•30760	12	2•09188	13	3•55531	14
35•6	•0281	1•30761	12	2•09191	13	3•55539	14
35•7	•0280	1•30761	12	2•09193	13	3•55547	14
35•8	•0279	1•30762	12	2•09195	13	3•55555	14
35•9	•0279	1•30762	12	2•09197	13	3•55562	14
36•0	•0278	1•30763	12	2•09199	13	3•55569	14
36•1	•0277	1•30763	12	2•09201	13	3•55576	14
36•2	•0276	1•30764	12	2•09202	13	3•55582	14
36•3	•0275	1•30764	12	2•09204	13	3•55588	14
36•4	•0275	1•30765	12	2•09206	13	3•55593	14
36•5	•0274	1•30765	12	2•09207	13	3•55598	14
36•6	•0273	1•30765	12	2•09208	13	3•55603	14
36•7	•0272	1•30766	12	2•09210	13	3•55608	14
36•8	•0272	1•30766	12	2•09211	13	3•55612	14
36•9	•0271	1•30766	12	2•09212	13	3•55617	14
37•0	•0270	1•30767	12	2•09213	13	3•55621	14
37•1	•0270	1•30767	12	2•09214	13	3•55624	14
37•2	•0269	1•30767	12	2•09215	13	3•55628	14
37•3	•0268	1•30768	12	2•09216	13	3•55631	14
37•4	•0267	1•30768	12	2•09217	13	3•55635	14
37•5	•0267	1•30768	12	2•09218	13	3•55638	14
37•6	•0266	1•30768	12	2•09218	13	3•55641	14
37•7	•0265	1•30768	12	2•09219	13	3•55643	14
37•8	•0265	1•30769	12	2•09220	13	3•55646	14
37•9	•0264	1•30769	12	2•09221	13	3•55648	14
38•0	•0263	1•30769	12	2•09221	13	3•55651	14
38•1	•0262	1•30769	12	2•09222	13	3•55653	14
38•2	•0262	1•30769	12	2•09222	13	3•55655	14
38•3	•0261	1•30769	12	2•09223	13	3•55657	14
38•4	•0260	1•30769	12	2•09223	13	3•55659	14
38•5	•0260	1•30770	12	2•09224	13	3•55660	14
38•6	•0259	1•30770	12	2•09224	13	3•55662	14
38•7	•0258	1•30770	12	2•09225	13	3•55664	14
38•8	•0258	1•30770	12	2•09225	13	3•55665	14
38•9	•0257	1•30770	12	2•09225	13	3•55667	14
39•0	•0256	1•30770	12	2•09226	13	3•55668	14
39•1	•0256	1•30770	12	2•09226	13	3•55669	14
39•2	•0255	1•30770	12	2•09226	13	3•55670	14
39•3	•0254	1•30770	12	2•09227	13	3•55672	14
39•4	•0254	1•30770	12	2•09227	13	3•55673	14
39•5	•0253	1•30770	12	2•09227	13	3•55674	14
39•6	•0253	1•30771	12	2•09227	13	3•55675	14
39•7	•0252	1•30771	12	2•09228	13	3•55675	14
39•8	•0251	1•30771	12	2•09228	13	3•55676	14
39•9	•0251	1•30771	12	2•09228	13	3•55677	14
40•0	•0250	1•30771	12	2•09228	13	3•55678	14

TABLE 9. *List of n!, Riemann Zeta numbers, and limiting values of* $J_n(x)$

The Riemann Zeta numbers were calculated by using the identity

$$\zeta(n) \equiv \sum_{s=1}^{\infty} \frac{1}{s^n}. \tag{7}$$

The values for $n!$ were obtained from Herbert E. Salzer, *Tables of n! and* $\Gamma(n+\frac{1}{2})$ *for the first thousand values of n*, National Bureau of Standards Applied Mathematics Series 16. As shown in section 1.1, the limiting values for $J_n(x)$ are given by

$$\lim_{x\to\infty} J_n(x) = n!\zeta(n). \tag{12}$$

n	$n!$		$\zeta(n)$	$\lim_{x\to\infty} J_n(x) = n!\zeta(n)$	
	Coef.	Exp.		Coef.	Exp.
2	2.	(0)	1. 644 934 1	3. 289 868 2	(0)
3	6.	(0)	1. 202 056 9	7. 212 341 4	(0)
4	2. 4	(1)	1. 082 323 2	2. 597 575 7	(1)
5	1. 2	(2)	1. 036 927 8	1. 244 313 4	(2)
6	7. 2	(2)	1. 017 343 1	7. 324 870 3	(2)
7	5. 04	(3)	1. 008 349 3	5. 082 080 5	(3)
8	4. 032	(4)	1. 004 077 4	4. 048 440 1	(4)
9	3. 628 8	(5)	1. 002 008 4	3. 636 088 1	(5)
10	3. 628 8	(6)	1. 000 994 6	3. 632 409 2	(6)
11	3. 991 68	(7)	1. 000 494 2	3. 993 652 7	(7)
12	4. 790 016	(8)	1. 000 246 1	4. 791 194 8	(8)
13	6. 227 020 8	(9)	1. 000 122 7	6. 227 784 9	(9)
14	8. 717 829 1	(10)	1. 000 061 2	8. 718 362 6	(10)
15	1. 307 674 4	(12)	1. 000 030 6	1. 307 714 4	(12)
16	2. 092 279 0	(13)	1. 000 015 3	2. 092 311 0	(13)
17	3. 556 874 3	(14)	1. 000 007 6	3. 556 901 3	(14)

Values of the Riemann Zeta function have been calculated previously by J. P. Gram and reported in the Danske Vidensk. Selsk. Skrifter.; Nature Math. [8] 10, 313–325 (1925–26). His values were used by H. B. Dwight in *Mathematical tables*, (McGraw-Hill Book Co., Inc., New York, N. Y., 1941). The table 9 values agree with those given in the latter reference.

TABLE 10. *Bernoulli numbers utilized in expansions*

The Bernoulli numbers were obtained from Harold T. Davis, *Tables of the higher mathematical functions*, vol. II. (The Principal Press, Bloomington, Ind. 1935). The $(2s)!$ were obtained from the reference cited in table 9.

s	B_S		$B_S/(2s)!$		s	B_S		$B_S/(2s)!$	
	Coef.	Exp.	Coef.	Exp.		Coef.	Exp.	Coef.	Exp.
1	1. 666 666 7	−1	8. 333 333 3	−2	21	8. 416 930 5	17	5. 990 671 8	−34
2	3. 333 333 3	−2	1. 388 888 9	−3	22	4. 033 807 2	19	1. 517 454 9	−35
3	2. 380 952 4	−2	3. 306 878 3	−5	23	2. 115 074 9	21	3. 843 758 2	−37
4	3. 333 333 3	−2	8. 267 195 8	−7	24	1. 208 662 7	23	9. 736 353 4	−39
5	7. 575 757 6	−2	2. 087 675 7	−8	25	7. 500 866 7	24	2. 466 247 0	−40
6	2. 531 135 5	−1	5. 284 190 1	−10	26	5. 038 778 1	26	6. 247 076 7	−42
7	1. 166 666 7	0	1. 338 253 7	−11	27	3. 652 877 6	28	1. 582 403 0	−43
8	7. 092 156 9	0	3. 389 680 3	−13	28	2. 849 876 9	30	4. 008 273 6	−45
9	5. 497 117 8	1	8. 586 062 1	−15	29	2. 386 542 7	32	1. 015 307 6	−46
10	5. 291 242 4	2	2. 174 868 7	−16	30	2. 139 994 9	34	2. 571 804 1	−48
11	6. 192 123 2	3	5. 509 002 8	−18	31	2. 050. 097. 6	36	----------	-------
12	8. 658 025 3	4	1. 395 446 5	−19	32	2. 093 800 6	38	----------	-------
13	1. 425 517 2	6	3. 534 707 1	−21	33	2. 275 269 6	40	----------	-------
14	2. 729 823 1	7	8. 953 517 4	−23	34	2. 625 771 0	42	----------	-------
15	6. 015 808 7	8	2. 267 952 4	−24	35	3. 212 508 2	44	----------	-------
16	1. 511 631 6	10	5. 744 790 8	−26	36	4. 159 827 8	46	----------	-------
17	4. 296 146 4	11	1. 455 172 5	−27	37	5. 692 069 5	48	----------	-------
18	1. 371 165 5	13	3. 685 994 9	−29					
19	4. 883 323 2	14	9. 336 734 3	−31					
20	1. 929 657 9	16	2. 365 022 4	−32					

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THE NATIONAL BUREAU OF STANDARDS

The scope of activities of the National Bureau of Standards at its headquarters in Washington, D. C., and its major field laboratories in Boulder, Colorado, is suggested in the following listing of the divisions and sections engaged in technical work. In general, each section carries out specialized research, development, and engineering in the field indicated by its title. A brief description of the activities, and of the resultant publications, appears on the inside front cover.

WASHINGTON, D. C.

Electricity and Electronics. Resistance and Reactance. Electron Devices. Electrical Instruments. Magnetic Measurements. Dielectrics. Engineering Electronics. Electronic Instrumentation. Electrochemistry.

Optics and Metrology. Photometry and Colorimetry. Optical Instruments. Photographic Technology. Length. Engineering Metrology.

Heat. Temperature Physics. Thermodynamics. Cryogenic Physics. Rheology. Engine Fuels. Free Radicals Research.

Atomic and Radiation Physics. Spectroscopy. Radiometry. Mass Spectrometry. Solid State Physics. Electron Physics. Atomic Physics. Neutron Physics. Nuclear Physics. Radioactivity. X-rays. Betatron. Nucleonic Instrumentation. Radiological Equipment. AEC Radiation Instruments.

Chemistry. Organic Coatings. Surface Chemistry. Organic Chemistry. Analytical Chemistry. Inorganic Chemistry. Electrodeposition. Molecular Structure and Properties of Gases. Physical Chemistry. Thermochemistry. Spectrochemistry. Pure Substances.

Mechanics. Sound. Mechanical Instruments. Fluid Mechanics. Engineering Mechanics. Mass and Scale. Capacity, Density, and Fluid Meters. Combustion Controls.

Organic and Fibrous Materials. Rubber. Textiles. Paper. Leather. Testing and Specifications. Polymer Structure. Plastics. Dental Research.

Metallurgy. Thermal Metallurgy. Chemical Metallurgy. Mechanical Metallurgy. Corrosion. Metal Physics.

Mineral Products. Engineering Ceramics. Glass. Refractories. Enameled Metals. Concreting Materials. Constitution and Microstructure.

Building Technology. Structural Engineering. Fire Protection. Air Conditioning, Heating, and Refrigeration. Floor, Roof, and Wall Coverings. Codes and Specifications. Heat Transfer. Safety Standards.

Applied Mathematics. Numerical Analysis. Computation. Statistical Engineering. Mathematical Physics.

Data Processing Systems. SEAC Engineering Group. Components and Techniques. Digital Circuitry. Digital Systems. Analog Systems. Application Engineering.

● Office of Basic Instrumentation.

● Office of Weights and Measures.

BOULDER, COLORADO

Cryogenic Engineering. Cryogenic Equipment. Cryogenic Processes. Properties of Materials. Gas Liquefaction.

Radio Propagation Physics. Upper Atmosphere Research. Ionospheric Research. Regular Propagation Services. Sun-Earth Relationships. VHF Research.

Radio Propagation Engineering. Data Reduction Instrumentation. Modulation Systems. Navigation Systems. Radio Noise. Tropospheric Measurements. Tropospheric Analysis. Radio Systems Application Engineering. Radio Meteorology.

Radio Standards. High Frequency Electrical Standards. Radio Broadcast Service. High Frequency Impedance Standards. Electronic Calibration Center. Microwave Physics. Microwave Circuit Standards.


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