

Thus for $n = 6$ we have

$$\sigma_{12}(\nu) = \frac{42\nu^3 + 362\nu^2 + 1026\nu + 946}{2^{12}(\nu + 1)^6(\nu + 2)^3(\nu + 3)^2(\nu + 4)(\nu + 5)(\nu + 6)}.$$

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¹ RAYLEIGH, London Math. So. *Proc.*, s. 1, v. 5, 1874, p. 119–124; *Scientific Papers*, v. 1, 1899, p. 192, 195. The entry for $n=8$ is due to A. CAYLEY; see also his *Collected Papers*, v. 9, 1896, p. 20.

² J. R. AIREY, *Phil. Mag.*, s. 6, v. 41, 1921, p. 200–203.

³ C. G. J. JACOBI, *Astr. Nachrichten*, v. 28, 1849, cols. 93–94; *Gesammelte Werke*, Berlin, v. 7, 1891, p. 173 [for $10i + 32$, read $10i + 22$].

⁴ J. H. GRAF & E. GUBLER, *Einleitung in die Theorie der Bessel'schen Funktionen*, v. 1, Bern, 1898, p. 130.

⁵ N. NIELSEN, *Handbuch der Theorie der Cylinderfunktionen*, Leipzig, 1904, p. 360.

⁶ W. KAPTEYN, *Archives Néerlandaises d. Sci. exactes et nat.*, s. 2, v. 11, 1906, p. 149, 168.

⁷ A. R. FORSYTH, *Mess. Math.*, s. 2, v. 50, 1920, p. 135.

⁸ G. N. WATSON, *A Treatise on the Theory of Bessel Functions*, Cambridge, 1922 or 1944, p. 502.

QUERIES

13. TABLES OF INTEGRALS.—We are now interested in evaluating integrals of the following forms: $\int_x^\infty e^{-t} dt/t^n$, $\int_x^\infty e^{-t^2} dt/t^{2n}$. Are there published tables of these functions?

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EDITORIAL NOTE: Among many tables of $\int_x^\infty e^{-t} dt/t = -Ei(-x)$ reference may be given to NYMTP, *Tables of Sine, Cosine and Exponential Integrals*, 2v., 1940, for $x = [0.(0001)1.9999; 9D]$, $[0.(001)10; 9S]$, $[10(.1)15; 14D]$. There are useful Bibliographies in the volumes. When n is a positive integer $\int_x^\infty e^{-t} dt/t^n$ may be made to depend upon $Ei(-x)$. For the cases $n = +2(-1) - 2$ tables were published by W. L. Miller & T. R. Rosebrugh, R. So. Canada, *Proc. and Trans.*, series 2, section III, v. 9, 1903, p. 80–101, for $x = [.1(.001)1(.01)2; 9D]$. There are also tables (p. 80–81) of $-\int_x^\infty e^{-t} dt/t^2 + 1/x + \ln x$, and $-\int_x^\infty e^{-t} dt/t - \ln x$, for $x = [0.(001).1; 9D]$. In the case of the second integral, when $n = 0$ we have the error function of which the most extensive table is that of A. A. MARKOV, *Table des Valeurs de l'Intégrale* $\int_x^\infty e^{-t^2} dt$, St. Petersburg, 1888, for $x = [0.(001)3(.01)4.8; 11D]$ with Δ^2 ; see *MTAC*, p. 136. However a more extensive table of the closely related function $H(x) = \frac{2}{\sqrt{\pi}} \int_0^x e^{-t^2} dt$ has been published in NYMTP, *Tables of Probability Functions*, v. 1, 1941, $x = [0.(0001)1(.001)5.6; 15D]$. This table can be used to evaluate the above integral by means of the relation $\int_x^\infty e^{-t^2} dt = \frac{\sqrt{\pi}}{2} [1 - H(x)]$. Are there other tables of the first function than for $-2 > n > 2$, and of the second for $n \neq 0$?

QUERIES—REPLIES

14. TABLES OF $N^{3/2}$ (Q 5, p. 131; QR 8, p. 204; 11, p. 336; 13, p. 375).—We have ms. tables, to 10S, as follows for:

$$N = 100(1)1000, 1000(10)10\ 000, 1005(10)1565, \text{ and also} \\ N = [1.0001(.0001)1.0099; 9D].$$

On setting $(1 + \alpha)^{3/2} = 1 + (3/2)\alpha + \phi$, we found that

$$\begin{aligned} \text{for } 0 &\leq \alpha \leq 0.000\ 036\ 514, \phi = 0.000\ 000\ 000; \\ \text{for } 0.000\ 063\ 246 &\leq \alpha \leq 0.000\ 081\ 650, \phi = 0.000\ 000\ 002; \\ \text{for } 0.000\ 096\ 610 &\leq \alpha \leq 0.000\ 109\ 544, \phi = 0.000\ 000\ 004. \end{aligned}$$

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CORRIGENDA

P. 168, l. 15, for 220, read 120.

P. 229, **IIIC** 4, for $iH_0^{(2)}(-ix)$, read $-iH_0^{(2)}(-ix)$; for $H_1^{(2)}(-ix)$, read $-H_1^{(2)}(-ix)$.

P. 241, **VIB** 10, for $-.4(.01)+1.49$, read $-.49(.01)+1.49$; for $.4(.01)+.99$, read $.49(.01).99$.

P. 265, l. 33, for $+e^{-x}w_n(-x)$, read $-e^{-x}w_n(-x)$.

P. 369, l. 11, for $e = 0(1^\theta)99^\theta$, read $e = \cos \theta, \theta = 0(1^\theta)99^\theta$.