Incomplete Beta Function, Binomial Distribution

[26.33] Harvard University, Tables of the cumulative binomial probability distribution (Harvard Univ. Press, Cambridge, Mass., 1955). $\sum_{s=c}^{\infty} \binom{n}{s} p^s(1-p)^{n-s}$ for $p=.01(.01).5$, 1/16, 1/12, 1/8, 1/6, 3/16, 5/16, 1/3, 3/8, 5/12, 7/16, $n=1(1)50(2)100(10)200(20)500(50)1000$, 5D.

[26.34] National Bureau of Standards, Tables of the binomial probability distribution, Applied Math. Series 6 (U.S. Government Printing Office, Washington, D.C., 1950). $\binom{n}{s}p^s(1-p)^{n-s}$ and $\sum_{s=c}^{n} \binom{n}{s}p^s(1-p)^{n-s}$ for $p=.01(.01).5$, $n=2(1)49$, 7D.

[26.35] K. Pearson (Editor), Tables of the incomplete beta function, Biometrika Office, University College (Cambridge Univ. Press, Cambridge, England, 1948). $I_x(a,b)$ for $x=.01(.01)1$; $a,b=.5(.5)11(1)50$, $a\geq b$, 7D.

[26.36] W. H. Robertson, Tables of the binomial distribution function for small values of p, Office of Technical Services, U.S. Department of Commerce (1960). $\sum_{s=0}^{c} \binom{n}{s}p^s(1-p)^{n-s}$ for $p=.001(.001).02$, $n=2(1)100(2)200(10)500(20)1000$; $p=.021(.001).05$, $n=2(1)50(2)100(5)200(10)300(20)600(50)1000$, 5D.

[26.37] H. G. Romig, 50–100 Binomial tables (John Wiley & Sons, Inc., New York, N.Y., 1953). $\binom{n}{s}p^s(1-p)^{n-s}$ and $\sum_{s=0}^{c}\binom{n}{s}p^s(1-p)^{n-s}$ for $p=.01(.01).5$ and $n=50(5)100$, 6D.

[26.38] C. M. Thompson, Tables of percentage points of the incomplete beta function, Biometrika **32**, 151–181 (1941). Also reproduced as Table 16 in [26.11]. Tabulates values of x for which * $I_x(a, b)=.005$, .01, .025, .05, .1, .25, .5; $2a=1(1)30$, 40, 60, 120, ∞; $2b=1(1)10$, 12, 15, 20, 24, 30, 40, 60, 120, 5D.

[26.39] U.S. Ordnance Corps, Tables of the cumulative binomial probabilities, ORDP 20–1, Office of Technical Services, Washington, D.C. (1952). $\sum_{s=c}^{n}\binom{n}{s}p^s(1-p)^{n-s}$ for $p=.01(.01).5$ and $n=1(1)150$, 7D.

F (Variance-Ratio) and Non-Central *F* Distribution

[26.40] Table V of [26.7]. Tabulates values of F and $Z=\frac{1}{2}\ln F$ for $Q(F|\nu_1, \nu_2)=.2$, .1, .05, .01, .001; $\nu_1=1(1)6$, 8, 12, 24, ∞; $\nu_2=1(1)30$, 40, 60, 120, ∞, 2D for F, 4D for Z.

[26.41] E. Lehmer, Inverse tables of probabilities of errors of the second kind, Ann. Math. Statist. **15**, 388–398 (1944). $\phi=\sqrt{\lambda/(\nu_1+1)}$ for $\nu_1=1(1)10$, 12, 15, 20, 24, 30, 40, 60, 120, ∞; $\nu_2=2(2)20$, 24, 30, 40, 60, 80, 120, 240, ∞ and $P(F'|\nu_1, \nu_2, \phi)=.2$, .3 where $Q(F'|\nu_1, \nu_2)=.01$, .05, 3D or 3S.

[26.42] M. Merrington and C. M. Thompson, Tables of percentage points of the inverted beta (F) distribution, Biometrika **33**, 73–88 (1943). Tabulates values of F for which $Q(F|\nu_1, \nu_2)=.5$, .25, .1, .05, .025, .01, .005; $\nu_1=1(1)10$, 12, 15, 20, 24, 30, 40, 60, 120, ∞; $\nu_2=1(1)30$, 40, 60, 120, ∞.

[26.43] P. C. Tang, The power function of the analysis of variance tests with tables and illustrations of their use, Statistical Research Memoirs II, 126–149 and tables (1938). $P(F'|\nu_1, \nu_2, \phi)$ for $\nu_1=1(1)8$, $\nu_2=2(2)6(1)30$, 60, ∞ and $\phi=\sqrt{\lambda/\nu_1+1)}=1(.5)3(1)8$ where $Q(F'|\nu_1, \nu_2)=.01$, .05, 3D.

Student's *t* and Non-Central *t*-Distributions

[26.44] E. T. Federighi, Extended tables of the percentage points of Student's t-distribution, J. Amer. Statist. Assoc. **54**, 683–688 (1959.) Values of t for which $Q(t|\nu)=\frac{1}{2}[1-A(t|\nu)]=.25\times 10^{-n}$, $.1\times 10^{-n}$, $n=0(1)6$, $.05\times 10^{-n}$, $n=0(1)5$, $\nu=1(1)30(5)60(10)100$, 200, 500, 1000, 2000, 10000, ∞; 3D.

[26.45] Table III of [26.7]. Values of t for which $A(t|\nu)=.1(.1).9$, .95, .98, .99, .999 and $\nu=1(1)30$, 40, 60, 120, ∞; 3D.

[26.46] N. L. Johnson and B. L. Welch, Applications of the noncentral t-distribution, Biometrika **31**, 362–389 (1939). Tabulates an auxiliary function which enables calculation of δ for given t' and p, or t' for given δ and p where $P(t'|\nu,\delta)=p=.005$, .01, .025, .05, .1(.1).9, .95, .975, .99, .995.

[26.47] J. Neyman and B. Tokarska, Errors of the second kind in testing Student's hypothesis, J. Amer. Statist. Assoc. **31**, 318–326 (1936). Tabulates δ for $P(t'|\nu,\delta)=.01$, .05, .1(.1).9; $\nu=1(1)30$, ∞; $Q(t'|\nu)=.01$, .05.

[26.48] Table 9 of [26.11]. $P(t|\nu)=\frac{1}{2}[1+A(t|\nu)]$ for $t=0(.1)4(.2)8$; $\nu=1(1)20$, 5D; $t=0(.05)2(.1)4$, 5; $\nu=20(1)24$, 30, 40, 60, 120, ∞, 5D.

[26.49] G. S. Resnikoff and G. J. Lieberman, Tables of the noncentral t-distribution (Stanford Univ. Press, Stanford, Calif., 1957). $\partial P(t'|\nu,\delta)/\partial t'$ and $P(t'|\nu,\delta)$ for $\nu=2(1)24(5)49$, $\delta=\sqrt{\nu+1}\,x_p$ where $Q(x_p)=p=.25$, .15, .1, .065, .04, .025, .01, .004, .0025, .001 and $t'/\sqrt{\nu}$ covers the range of values such that throughout most of the table the entries lie between 0 and 1, 4D.

Random Numbers and Normal Deviates

[26.50] E. C. Fieller, T. Lewis and E. S. Pearson, Correlated random normal deviates, Tracts for Computers 26 (Cambridge Univ. Press, Cambridge, England, 1955).

[26.51] T. E. Hull and A. R. Dobell, Random number generators, Soc. Ind. App. Math. **4**, 230–254 (1962).

[26.52] M. G. Kendall and B. Babington Smith, Random sampling numbers (Cambridge Univ. Press, Cambridge, England, 1939).

*See page II.