

has the indicated prerequisites can readily gain an introduction to the theory and applications of Markov processes.

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70 [K].—R. E. BECKHOFER, SALAH ELMAGHRABY & NORMAN MORSE, “A single-sample multiple-decision procedure for selecting the multinomial event which has the highest probability,” *Ann. Math. Statist.*, v. 30, 1959, p. 102–119.

Consider N k -nomial trials whose cell probabilities satisfy $p_1 = \cdots = p_{k-1} = p_k/\theta^*$. We select that cell into which the most events fall, breaking a tie at random if it occurs. The authors give a 5D table of the probability of selecting cell k , for $k = 2, 3, 4$; $\theta^* = 1.02(.02)1.1(.1)2(.2)3, 10$; and $N = 1(1)30$. An approximation is developed and compared with these values.

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71 [K].—K. G. CLEMANS, “Confidence limits in the case of the geometric distribution,” *Biometrika*, v. 46, 1959, p. 260–264.

The author obtains confidence limits for estimating m , the expected number of trials before a device fails, given the sample mean \bar{x} , and N , the number of devices. If N devices each are from an identical geometric distribution, the distribution of sample sums will follow a Pascal distribution. Two log-log charts are provided for two-sided 90% and 98% confidence limits for m , $1 \leq \bar{x} \leq 10,000$, and $N = 2, 5, 10, 15, 20, 30, 50, 100$. The charts are based on the exact distribution. For $\bar{x} > 10,000$, formulas and tables may be used to determine the confidence limits. For large $N > 100$ a special formula is given. Alternatively for large N , since sample means are approximately normal, confidence limits for m may be found as solutions of the quadratic equation obtained from $t = \sqrt{N}(\bar{x} - m) \div m(m + 1)$, where t is the usual normal deviate for the α percent point.

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72 [K].—E. T. FEDERIGHI, “Extended tables of the percentage points of Student’s t -distribution,” *J. Amer. Statist. Assn.*, v. 54, 1959, p. 683–688.

The author states that in using Student’s t -distribution in testing component parts a need for extending the table of upper percentage points was revealed. The method of calculation of these percentage points is presented, and a table containing these results is given. Let y_t be the elementary density for Student’s t with n degrees of freedom, and denote $\int_{t_0}^{\infty} y_t dt$ by P . The values of t_0 are given to 3D for $P = .25, .10, .05, .025, .01, .005, .0025, .001, 5 \times 10^{-4}, 25 \times 10^{-5}, 1 \times 10^{-4}, 5 \times 10^{-5}, 25 \times 10^{-6}, 1 \times 10^{-5}, 5 \times 10^{-6}, 25 \times 10^{-7}, 1 \times 10^{-6}, 25 \times 10^{-8}, 1 \times 10^{-7}$, and $n = 1(1) 30 (5) 60(10) 100, 200, 500, 10^3, 2 \times 10^3, 10^4$, and ∞ . It would have been