

central q -distribution with the power function of Lord's [2], [3] central t -test (u -test). This is done by tabulating $q_{.05}$ against an approximation to it which is based on the power function of Lord's u -test. The comparison is made for combinations $m = 1, 2, 4$ and $n = 3, 4, 6, 8, 10$. For each of the fifteen combinations a value of K_p is chosen such that α (error of first kind) = β (error of second kind) = .05, approximately. Values of $q_{.05}$ corresponding to these K_p are compared with the approximated values as a rough check on the tabulated values of q_α .

In conjunction with the tables of percentage points, twelve figures are given which show the relation (almost linear) between q_ϵ and K_p for p ranging from .001 to .20 (extended to .50 in some figures). For each value of ϵ and m , the relationship is shown for various values of n from 3 to 12. These graphs make possible the determination of q_ϵ for other than the six tabulated values of p .

Several examples are given which demonstrate the application of the non-central q -test in industrial sampling inspection. These illustrations indicate that the non-central q -test and corresponding tables of percentage points can be very useful in such work.

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1. N. L. JOHNSON & B. L. WELCH, "Applications of the non-central t distribution," *Biometrika*, v. 31, 1940, p. 362-389.

2. E. LORD, "The use of range in place of standard deviation in the t -test," *Biometrika*, v. 34, 1947, p. 41-67.

3. E. LORD, "Power of the modified t -test (u -test) based on range," *Biometrika*, v. 37, 1950, p. 64-77.

79[L].—S. L. BELOUSOV, *Tables of Normalized Associated Legendre Polynomials*, Pergamon Press, Ltd., Oxford, distributed by The Macmillan Company, New York, 1962, 379 p., 26 cm. Price \$20.00.

This is a republication in an attractive binding of Russian tables of normalized associated Legendre polynomials previously reviewed in this journal (*MTAC*, v. 11, 1957, p. 276, RMT 115).

For convenience the contents are here summarized again. The polynomials $\bar{P}_n^m(\cos \theta)$ considered are related to the associated Legendre polynomials P_n^m by the normalizing factor $\left[\frac{2n+1}{2} \frac{(n-m)!}{(n+m)!} \right]^{1/2}$, so that $\int_{-1}^1 [\bar{P}_n^m(x)]^2 dx = 1$, and are herein tabulated to 6D for $m = 0(1)36$, $n = m(1)56$, and $\theta = 0(2^\circ.5)90^\circ$. No tabular differences are given.

The introduction has been translated into English by D. E. Brown.

These useful tables remain the most extensive of their kind published to date.

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80[L].—O. S. BERLYAND, R. I. GAVRILOVA, & A. P. PRUDNIKOV, *Tables of Integral Error Functions and Hermite Polynomials*, Pergamon Press, Ltd., Oxford, England, distributed by The Macmillan Co., New York, 1962, 163 p., 26 cm. Price \$15.00.

This volume of the Pergamon Mathematical Tables Series is an English translation by Prasenjit Basu of original tables of integral error functions and Hermite polynomials published in Minsk in 1961 by the Byelorussian Academy of Sciences.