NAG Fortran Library Chapter Contents

G01 – Simple Calculations on Statistical Data

Note: please refer to the Users' Note for your implementation to check that a routine is available.

G01 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
G01AAF	4	Mean, variance, skewness, kurtosis, etc., one variable, from raw data
G01ABF	4	Mean, variance, skewness, kurtosis, etc., two variables, from raw data
G01ADF	4	Mean, variance, skewness, kurtosis, etc., one variable, from frequency table
G01AEF	4	Frequency table from raw data
G01AFF	4	Two-way contingency table analysis, with χ^2/Fisher's exact test
G01AGF	8	Lineprinter scatterplot of two variables
G01AHF	8	Lineprinter scatterplot of one variable against Normal scores
G01AJF	10	Lineprinter histogram of one variable
G01ALF	14	Computes a five-point summary (median, hinges and extremes)
G01ARF	14	Constructs a stem and leaf plot
G01ASF	14	Constructs a box and whisker plot
G01BJF	13	Binomial distribution function
G01BKF	13	Poisson distribution function
G01BLF	13	Hypergeometric distribution function
G01DAF	8	Normal scores, accurate values
G01DBF	12	Normal scores, approximate values
G01DCF	12	Normal scores, approximate variance-covariance matrix
G01DDF	12	Shapiro and Wilk's W test for Normality
G01DHF	15	Ranks, Normal scores, approximate Normal scores or exponential (Savage) scores
G01EAF	15	Computes probabilities for the standard Normal distribution
G01EBF	14	Computes probabilities for Student's t-distribution
G01ECF	14	Computes probabilities for χ^2 distribution
G01EDF	14	Computes probabilities for F-distribution
G01EEF	14	Computes upper and lower tail probabilities and probability density function for the beta distribution
G01EFF	14	Computes probabilities for the gamma distribution
G01EMF	15	Computes probability for the Studentized range statistic
G01EPF	15	Computes bounds for the significance of a Durbin–Watson statistic
G01ERF	16	Computes probability for von Mises distribution
G01ETF	21	Landau distribution function $\Phi(\lambda)$
G01EUF	21	Vavilov distribution function $\Phi_V(\lambda; \kappa, \beta^2)$
G01EYF	14	Computes probabilities for the one-sample Kolmogorov–Smirnov distribution
G01EZF	14	Computes probabilities for the two-sample Kolmogorov–Smirnov distribution
G01FAF	15	Computes deviates for the standard Normal distribution
G01FBF	14	Computes deviates for Student's t-distribution
G01FCF	14	Computes deviates for the χ^2 distribution
G01FDF	14	Computes deviates for the F-distribution
G01FEF	14	Computes deviates for the beta distribution
G01FFF	14	Computes deviates for the gamma distribution
G01FMF	15	Computes deviates for the Studentized range statistic
G01FTF	21	Landau inverse function $\Psi(x)$
G01GBF	14	Computes probabilities for the non-central Student's t-distribution
G01GCF	14	Computes probabilities for the non-central χ^2 distribution
G01GDF	14	Computes probabilities for the non-central F-distribution

G01GEF	14	Computes probabilities for the non-central beta distribution
G01HAF	14	Computes probability for the bivariate Normal distribution
G01HBF	15	Computes probabilities for the multivariate Normal distribution
G01JCF	14	Computes probability for a positive linear combination of χ^2 variables
G01JDF	15	Computes lower tail probability for a linear combination of (central) χ^2 variables
G01MBF	15	Computes reciprocal of Mills' Ratio
G01MTF	21	Landau density function $\phi(\lambda)$
G01MUF	21	Vavilov density function $\phi_V(\lambda; \kappa, \beta^2)$
G01NAF	16	Cumulants and moments of quadratic forms in Normal variables
G01NBF	16	Moments of ratios of quadratic forms in Normal variables, and related statistics
G01PTF	21	Landau first moment function $\Phi_1(x)$
G01QTF	21	Landau second moment function $\Phi_2(x)$
G01RTF	21	Landau derivative function $\phi\prime(\lambda)$
G01ZUF	21	Initialization routine for G01MUF and G01EUF