



The Tektronix Statistics Program Libraries

Work on Stat Solutions, not problems.

Want to combine statistical expertise with your TEK 21 or 31 calculators? Take advantage of TEK's new statistical software library. The library provides programs to streamline all your statistical calculations. Data entry and solutions are as easy as pressing a key.

The Stat-Pak library programs come in the form of a manual, with a different publication for

both 21 and 31 calculators. Each of these is divided into sections applicable to the particular memory configuration involved. Each section is further documented into individual program steps. Included are pages for program description, examples and program execution.

Product Data

TEK 21 STATISTICS PROGRAM LIBRARY

The library is divided into seven sections: two for the basic 128 step machine and five for the 256 step memory option. The sections are:

128 STEPS

Section 1 General statistics and curve fitting

- 1-1 Random Number Generation
- 1-2 Arithmetic, Geometric, and Harmonic Means
- 1-3 One Variable Statistics
- 1-4 Two Variable Statistics (Paired Entries)
- 1-5 Two Variable Statistics (Independent Samples)
- 1-6 Curve Fitting:
 $y = a_0 + a_1 x$

Section 2 Tests and distributions

- 2-1 χ^2 — Test for Given x
- 2-2 χ^2 — Test with Equal Expectations
- 2-3 χ^2 — Test with Unequal Expectations
- 2-4 2 x 2 Contingency Table (Yate's Correction)
- 2-5 2 x k Contingency Table
- 2-6 Paired t and F Tests
- 2-7 t — Statistic Assuming Unknown, Equal Variances
- 2-8 t — Statistics Assuming Unknown, Unequal Variances
- 2-9 t — Test for μ_x
- 2-10 F — Test
- 2-11 Binomial Distribution
- 2-12 Poisson Distribution

256 STEPS

Section 3 General statistics

- 3-1 Random Number Generation
- 3-2 Arithmetic, Geometric, and Harmonic Means
- 3-3 One Variable Statistics
- 3-4 Two Variable Statistics
- 3-5 Three Variable Statistics

Section 4 Tests

- 4-1 χ^2 — Tests
- 4-2 2 x k Contingency Tables
- 4-3 Bartlett's χ^2 Test for Equality of Population Variances
- Paired t and F Tests:
See Statistics 3-4

- 4-4 t — Statistic Assuming Unknown, Equal Variances
- 4-5 t — Statistic Assuming Unknown, Unequal Variances
- 4-6 t — Test for μ_x
- 4-7 F — Test
- 4-8 Spearman's Rank Correlation Coefficient

Section 5 Distributions

- 5-1 Binomial Distribution
- 5-2 Poisson Distribution
- 5-3 Normal Distribution
- 5-4 χ^2 — Distribution
- 5-5 t — Distribution
- 5-6 F — Distribution

Section 6 Curve fitting

- 6-1 Curve Fitting:
 $y = a_0 + a_1 x$
- 6-2 Curve Fitting: $y = ae^{bx}$
- 6-3 Curve Fitting: $y = ax^b$
- 6-4 Curve Fitting: Hyperbola and Ellipse
- 6-5 Curve Fitting:
 $y = a_0 + a_1 x + a_2 x^2$
- 6-6 Curve Fitting:
 $z = a_0 + a_1 x + a_2 y$

Section 7 Analysis of variance

- 7-1 One-Way Analysis of Variance (Equal or Unequal Group Size)
- 7-2 Yates 2² Factorial Design
- 7-3 Yates 2³ Factorial Design

Each program or sub-routine can easily be recorded and stored on magnetic cards.

The library has been designed so programs can be "linked" together.

TEK 31 STATISTICS PROGRAM LIBRARY

This library is designed primarily for the basic configuration (512 steps and 64 data registers).

Section 1 General statistics

- 1-1 Random Number Generation
- 1-2 Histogram

Section 2 Tests

- 2-1 χ^2 — Tests
- 2-2 χ^2 — Test with Unequal Expectations
- 2-3 2 x k Contingency Table
- 2-4 m x n Contingency Table
- 2-5 Bartlett's χ^2 Test for Equality of Population Variances
- 2-6 Paired t and F Tests
- 2-7 F and t Tests
- 2-8 t — Test for μ_x
- 2-9 Spearman's Rank Correlation Coefficient

Section 3 Distributions

- 3-1 Binomial Distribution
- 3-2 Poisson Distribution
- 3-3 Normal Distribution
- 3-4 χ^2 — Distribution
- 3-5 t — Distribution
- 3-6 F — Distribution

Section 4 Curve fitting

- 4-1 Curve Fitting: Line, Exponent, Power
- 4-2 Curve Fitting: $y = ae^{bx}$
- 4-3 Curve Fitting: $y = ax^b$
- 4-4 Curve Fitting: Hyperbola and Ellipse
- 4-5 Polynomial Curve Fitting for 512 Step Calculator
- 4-6 Polynomial Curve Fitting for 1024 Step Calculator
- 4-7 Multiple Linear Regression for 512 Step Calculator
- 4-8 Multiple Linear Regression for 1024 Step Calculator

Each program or subroutine can be recorded and stored on magnetic tape cartridges.

Though linking capability is built in, it's not usually required due to the large 512 step memory.

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