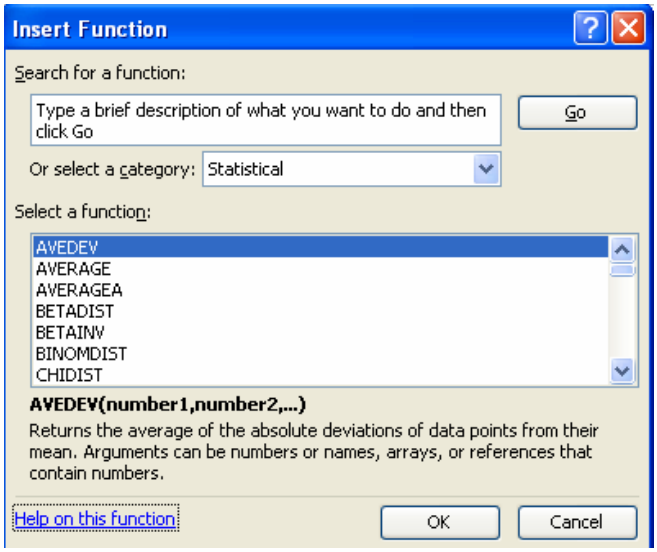
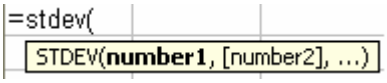
Statistics on Excel® – Prof. Richard B. Goldstein

Statistical Functions: Left click on f_x = to bring up the help for inserting functions:



There is also help in context:



Excel – Descriptive Statistics

AVEDEV(array)
AVERAGE(array)
CORREL(array1,array2)
COUNT(array)
COVAR(array1,array2)
GEOMEAN(array)
HARMEAN(array)
KURT(array)
LARGE(array, k)
MAX(array)
MEDIAN(array)
MIN(array)
MODE(array)
PERCENTILE(array, k)
PERCENTRANK(array, x)
QUARTILE(array, quart)
RANK(x, array, order)
SKEW(array)
SMALL(array, k)
STDEV(array)
STDEVP(array)
TRIMMEAN(array, percent)
VAR(array)
VARP(array)

Excel – Matrix/Array Functions

SUM(array)	Σx_i
SUMPRODUCT(array1, array2, …)	$\Sigma x_i y_i$ $\Sigma x_i y_i z_i$ $\Sigma (x_i)^2 y_i$ **or similar sums**
SUMSQ(array)	$\Sigma (x_i)^2$
SUMXMY2(array1, array2)	$\Sigma (x_i - y_i)^2$
MINVERSE(array)	A^{-1}
MMULT(array1, array2)	**AB**
TRANSPOSE(array)	$A^T = A'$

To use these three matrix functions:
(1) Highlight the output cells
(2) Press **F2** and enter the function
(3) Press CTRL-Shift-Enter

A must be square for A^{-1}, AB must be compatible matrices

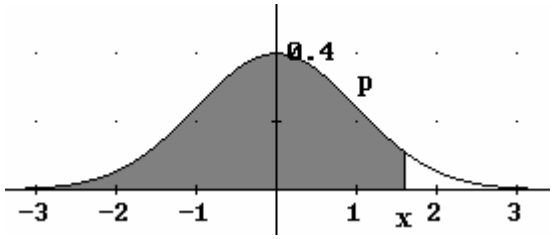
Excel – Distributions

BETADIST(x, α, β, A, B)
BETAINV(p, α, β, A, B)
BINOMIST(k, n, p, cumulative)
CHIDIST(x, df)
CHIINV(p, df)
EXPONDIST(x, λ, cumulative)
FDIST(x, df1, df2)
FINV(p, df1, df2)
GAMMADIST(x, α, β, cumulative)
GAMMAINV(p, α, β)
HYPGEOMDIS(x, n, M, N)
LOGINV(p, mean, stdev)
LOGNORMDIST(x, mean, stdev)
NEGBINOMDIST(ns, nf, p)
NORMDIST(x, mean, stdev, cumulative)
NORMINV(p, mean, stdev)
POISSON(x, mean, p)
WEIBULL(x, α, β, cumulative)

Most Common

NORMDIST(x, mean, stdev, cumul) = p

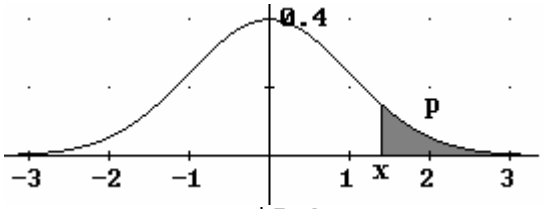
cumul = 1 as shown
cumul = 0 gives prob. density function



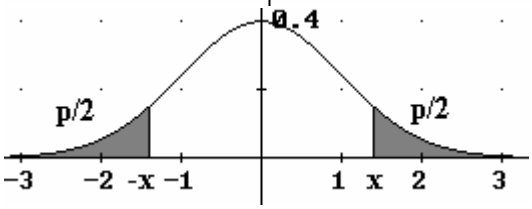
NORMINV(p, mean, stdev) = x

TDIST(x, df, tails) = p

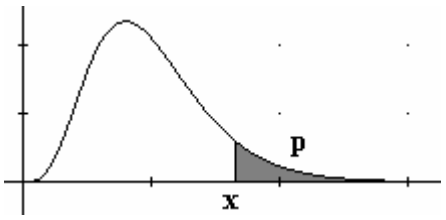
tails = 1 top
tails = 2 bottom



TINV(p , df) = x for 2 tails



CHIDIST(x, df) = p
CHIINV(p, df) = x



FDIST(x, df1, df2) = p
FINV(p, df1, df2) = x

Drop-Down Menu Options

Data | Sort	Sort one or more columns in ascending or descending order
Data | Text to Column	Takes data from a text file and parses it into separate columns
Tools | Solver	Can be use for nonlinear least squares and other optimization
Tools | Data Analysis	Descriptive Statistics, Correlation, Random Number Generation, Hypothesis Testing, Regression, ANOVA, Histograms, etc. (the Tools options sometimes need to be installed from original CD)