CALCULATING r^2

When you calculate a regression line, the value of r^2 may not appear. If not, go to CATALOG and turn DiagnosticsOn.

DISTRIBUTIONS on TI-83

Under DISTR menu (=2nd VARS)

Binomial : *B(n,p)*

Probability distribution	binomialpdf *(n,p)*
Cumulative distribution	binomialcdf *(n,p)*
$P(X = x)$	binomialpdf *(n,p,x)*
$P(X \leq x)$	binomialcdf *(n,p,x)*

Examples

binomialpdf (2, 0.5) = {0.25, 0.5, 0.25}
binomialcdf (2, 0.5) = {0.25, 0.75, 1}
binomialpdf (2, 0.5, 1) = 0.5
binomialcdf (2, 0.5, 1) = 0.75

Normal : *N(μ,σ)*

Probability density	normalpdf *(x, μ, σ)*
$P(a \leq X \leq b)$	normalcdf *(a, b, μ, σ)*

Either σ, or σ and μ, can be omitted, in which case μ = 0 and σ = 1 are assumed.

Examples

normalcdf (-1, 1) = 0.68
normalcdf (-2, 2) = 0.95
normalcdf (-3, 3) = 0.997

Inverse Normal

To find *x*, given *y*:

If $P(-\infty < X \leq x) = y$, use invNorm $(y, \mu, \sigma) = x$.

Again, either σ, or μ and σ, can be omitted, in which case μ = 0 and σ = 1 are assumed.

Examples

invNorm (0.5) = 0 because $P(-\infty < X \leq 0) = 0.5$,
invNorm (0.975) = 1.96 ≈ 2 because $P(-\infty < X < 2) \approx 0.975$

t-distribution with *n* Degrees of Freedom: *T(n)*

Probability density	tpdf *(x, n)*
P (a ≤ X ≤ b)	tcdf *(a, b, n)*
Inverse *t*-distribution	
If *P(-∞ < T ≤ x) = y*	invT *(y, n) = t*

χ^2 -distribution with *n* degrees of freedom (df): χ^2 *(n)*

Probability density	χ^2 pdf *(x, n)*
P (a ≤ X ≤ b)	χ^2 cdf *(a, b, n)*

F-distribution with *n* df in numerator and *k* df in denominator: *F(n, k)*

Probability density	Fpdf *(x, n, k)*
P (a ≤ X ≤ b)	Fcdf *(a, b, n, k)*