

Given:	Find:	Formula:	Steps:
"Standard normal"	The probability, area, or percentage	None	Just use the Z-table to find the answer
"Standard normal"	Z or "critical value"	None	Find the percentage inside the table and work backwards to find the Z or use the ti calculator and plug in invNorm(% in decimal form)
X, μ, σ	The probability, area, or percentage	$Z = \frac{x-\mu}{\sigma}$ or $Z = \frac{x-\bar{x}}{s}$	Use formula then get the answer from the z table
μ, σ , and a probability/area/%	x "value"	$X = \mu + (Z * \sigma)$	get the z value for the percentage from the table/calculator then plug values into the formula and solve for your answer
μ, σ, n , and \bar{x}	The probability, area, or percentage	$Z = \frac{x-\mu}{\sigma/\sqrt{n}}$	Get your Z from the formula or your calculator (stat tests Ztest) then go to z table for your answer
μ, σ, n , and a probability/area/%	sample mean	$\bar{x} = \mu + \left(Z * \frac{\sigma}{\sqrt{n}} \right)$	get the z value for the percentage from the table/calculator then plug values into the formula and solve for your answer
n, p , and x	The probability, area, or percentage	$Z = \frac{x-\mu}{\sigma}$ Where: x uses the continuity correction, $\mu=np$ $\sigma = \sqrt{npq}$	Use continuity correction for x, then use the formula to get Z, Finally get your answer from the z table
Margin of error, Confidence Level, σ	Sample size	$n = \left[\frac{Z_{\alpha/2} \sigma}{E} \right]^2$	Find the critical value using the confidence level, then use formulas to find the sample size (NOTE: you always round sample sizes up)
confidence level, \bar{x} , n , σ	confidence Interval	$\bar{x} - E < \mu < \bar{x} + E$ Where: $E = Z_{\alpha/2} * \frac{\sigma}{\sqrt{n}}$	Find the critical value using the confidence level, then use formulas to find the interval OR use stat tests Zint to get the interval (note you'll still need to provide the E so be able to work backwards if you're using the calculator answer)