

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 values Press: 2 <sup>nd</sup> VARS 3: InvNorm( % in decimal form)
$x, \mu, \sigma$ Note: Sample size is NOT given	The probability, area, OR percentage	$Z = \frac{x - \mu}{\sigma}$	Use the formula, then get the answer from the Z table
$\mu, \sigma$ , and a probability / area / % Note: Sample size is NOT given	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 it for your answer
$\mu, \sigma, n$ , and $\bar{x}$	The probability, area OR percentage	$Z = \frac{(\bar{x} - \mu)}{(\sigma/\sqrt{n})}$	Get your Z from the formula or your calculator Press: Stat → Tests 1:Z-Test) then go to the Z-table for your final answer
$\mu, \sigma, n$ , 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 $x$ Note: Standard deviation, and mean are NOT given	The probability, area OR percentage	$Z = \frac{x - \mu}{\sigma}$ Where x uses the CONTINUITY CORRECTION $\mu = n * p$ and $\sigma = \sqrt{n * p * q} = \sqrt{n * p * (1 - p)}$	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, sample proportion	Sample Size	$n = \frac{(Z_{\alpha/2})^2 \hat{p}\hat{q}}{E^2}$	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, Sample proportion (or $x / n$ ), sample size	Confidence Interval	$\hat{p} - E < p < \hat{p} + E$ Where: $\hat{p} = \frac{x}{n}$ $E = Z_{\alpha/2} \sqrt{\frac{\hat{p}\hat{q}}{n}}$	Find the critical value using the confidence level, then use formulas to find the interval OR use your calculator Press: Stat → Test 1PropZint 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

