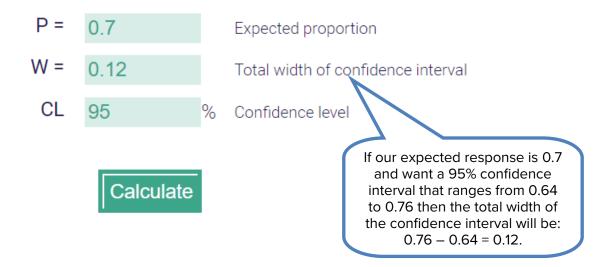


Precision of a Proportion

Objective: Determine Sample Size Necessary for Estimating a Proportion

An investigator is interested in determining the sample size needed in their study that is measuring the response rate of a patient showing up to their follow-up visit after a new protocol for reminders is put in place. The investigator is expecting 70% of patients to show up to the follow-up with the new protocol and would like a 95% confidence interval that ranges from 64% to 76%. That is, a 12-point total width of confidence interval (76 - 64 = 12).

Required Information	Inputs
What is the desired Confidence Interval?	95%
Response rate	70%
What is the total width of confidence interval?	0.12



1. Binomial "exact" calculation

Sample size = N = 238 Expected positive results in sample = x = 167

With a sample size of n = 238, if the estimated response rate is 70%, the 95% confidence interval will range from 64% to 76%.

<u>Example using the UCSF Sample Size Calculators for Designing Clinical Research (https://sample-size.net/sample-size-conf-interval-proportion/)</u>