

# [Minitab](https://assignbuster.com/minitab-essay-samples/)

[Science](https://assignbuster.com/essay-subjects/science/), [Statistics](https://assignbuster.com/essay-subjects/science/statistics/)

Assignment In June of 2009, a Pew Poll asked 1005 randomly selected people: Which over-the-counter drug do doctors recommend to help prevent heart attacks? Is it aspirin, cortisone, or antacids? (Options were rotated.) Of 1005, 914 correctly chose aspirin. Determine a 95% confidence interval for the population proportion who knew the correct answer.
SOLUTION
We sought to determine a 95% confidence interval for the population proportion who knew the correct answer
Assumptions;
Before we decide on the test to use, we make the following assumptions;
Random sampling from a defined population
Interval or ratio scale of measurement
Population is normally distributed
Test and CI for One Proportion: Correct drug
Test of p = 0. 5 vs p not = 0. 5
Event = 1
Variable X N Sample p 95% CI Z-Value P-Value
Correct drug 914 1005 0. 9095 (0. 8902, 0. 9257) 36. 714 0. 000
The p-value is given as 0. 000 (a value less than α= 0. 05); we thus reject the null hypothesis and conclude that there is significant difference in the proportion of those who gave the right answers and those that gave wrong answers. The Z-Score is 36. 714. The p-value is 0. 000. The result is significant at p