

Chapter 9 Lab

Wednesday, May 27, 2020 7:39 AM

Directions: Copy this page in your Lab folder. Answer each problem. Provide as much typed work as you can. Complete the full hypotheses testing process for each problem. **(Identify the null hypothesis, alternative hypothesis, test statistic, P-value, conclusion about the null hypothesis, and final conclusion that addresses the original claim.)** Use StatCrunch to find all calculations.

1. A researcher finds that of 1000 people who said that they attend a religious service at least once a week, 31 stopped to help a person with car trouble. Of 1200 people interviewed who had not attended a religious service at least once a month, 22 stopped to help a person with car trouble. At the 0.05 significance level, test the claim that the two proportions are equal.

2. A researcher was interested in comparing the response times of two different cab companies. Companies A and B were each called at 50 randomly selected times. The calls to company A were made independently of the calls to company B. The response times for each call were recorded. The summary statistics were as follows:

	Company A	Company B
Mean response time	7.6 mins	6.9 mins
Standard deviation	1.4 mins	1.7 mins

Use a 0.02 significance level to test the claim that the mean response time for company A is the same as the mean response time for company B. Use the P-value method of hypothesis testing.

3. A random sample of 16 women resulted in blood pressure levels with a standard deviation of 23 mm Hg. A random sample of 17 men resulted in blood pressure levels with a standard deviation of 19.2 mm Hg. Use a 0.05 significance level to test the claim that blood pressure levels for women vary more than blood pressure levels for men.