

College of the Redwoods
Mathematics Department

Elementary Statistics — Math 15
Study Question Quiz #11

Quiz Questions

Instructions. Place the solution to each of the following questions on your own paper. You must show all of your work to receive credit for your solution. Staple the quiz to your solutions before submitting your quiz.

EXERCISE 1. The *General Social Survey* asked American adults whether they agree with the proposition that men are better suited emotionally for politics than women are. The sample results are summarized in the following table.

	Men	Women
Agree	169	236
Disagree	565	777

- Test the hypothesis that men tend to agree with this proposition (“men are better suited emotionally for politics than women are”) more often than women do.
- Construct a 95% confidence interval for the difference in population proportions of agreement between men and women.

Solutions to Exercises

Exercise 1(a) $H_0 : p_1 - p_2 = 0$, $H_1 : p_1 - p_2 > 0$, D.O.E. = right, Observed value = -0.00273 , p -value = 0.55301 , Accept the null. □

Exercise 1(b) $\hat{p}_1 - \hat{p}_2 = 0.23024 - 0.23297 = -0.00273$, $\hat{p} = \frac{n_1\hat{p}_1 + n_2\hat{p}_2}{n_1 + n_2} = 0.23182$, $(\hat{p}_1 - \hat{p}_2) \pm z^* \sqrt{\hat{p}(1 - \hat{p})(1/n_1 + 1/n_2)}$, $(-0.0428, 0.03734)$ □