NAME: MATH 106

HOMEWORK #10 11/26/2012

Be sure to write down all steps and work, not just an answer. This homework is worth 10 points. Indicate your final answers clearly.

A recent Gallup poll of likely voters found that female respondents preferred Barack Obama to Mitt Romney by a margin of 56% to 44%, while male respondents preferred Mitt Romney to Barack Obama by a 54% to 46% margin. Gallup interviewed 1337 female voters and 1214 male voters. The sample variance for female voters was 0.2464 and the sample variance for male voters was 0.2484.

1) Find the 95% confidence interval for women voting for Barack Obama.

2) Find the 95% confidence interval for men voting for Barack Obama.

3) Does the data present sufficient evidence to suggest a difference between voter preferences of men and women? Use $\alpha = 0.05$.