

STAT 221 Introduction to Probability and Statistics Winter 2012

Quiz 7

Taken on Thur Jan 19. You may work with a group of as many as 4 students, submitting one quiz with all names, provided that you all contribute to the work. You may use your notes.

Recall that we examined a Gallup poll which found that in a sample of 1021 adult Americans, 54% considered economic growth to be a higher priority than environmental protection.

Now suppose that we test the null hypothesis $\pi = .5$ vs. the alternative hypothesis $\pi \neq .5$.

1. Describe (in words) what the symbol π represents here.
2. Use the applet to determine the (approximate) two-sided p-value.
3. How does this two-sided p-value compare to the one-sided p-value that we found previously: larger, smaller, or the same?
4. Use the applet to determine a 95% confidence interval for π .
5. Why does a 95% confidence interval for π turn out to be so much narrower with this study than with the kissing or baseball “big bang” study?