

Name: _____ Math 130 Day 13 Lecture Worksheet

Date: _____ Section 9.1: Confidence Intervals for a Population Proportion

Ex 1: Find

- a) $z_{0.025}$
- b) $z_{0.017}$
- c) $z_{0.10}$
- d) $z_{0.02}$
- e) $z_{0.05}$
- f) $z_{0.005}$

Ex 2: Scott is running for president of the United States. To estimate the percentage of voters who will vote for Scott in the election, 1500 registered voters were polled and asked who they planned to vote for in the election. Of those polled, 811 people said that they were planning to vote for Scott.

- a) What is the population?
- b) What is the sample?
- c) What is the population parameter (symbol and description)?
- d) What is your sample statistic (symbol, description, and value)?
- e) What is your best point estimate for the population parameter?
- f) Find a 98% confidence interval for the population parameter
- g) What does the 98% in a 98% confidence interval mean?

Ex 3: A bag contains 2 types of beads: pink beads and clear beads. In order to estimate the percentage of pink beads in the bag, you draw a sample of size 50.

- a) What is the population?
- b) What is the sample?
- c) What is the population parameter (symbol and description)?
- d) What is your sample statistic (symbol, description, and value)?
- e) What is your best point estimate for the population parameter?
- f) Find your 90% confidence interval for the population parameter
- g) What does the 90% in a 90% confidence interval mean?