Dr. ZABDAWI

Math 2101/Quiz 5

4/7/11

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Solve the problem.

1) Find the value of $-z_{\alpha/2}$ that corresponds to a level of confidence of 98.22 percent.

1) D

A) 0.0089 B) 2.37 C) -2.1 D) -2.37

$\alpha/2 = \frac{(1-.9822)}{2} = .0089$

$-z_{\alpha/2} = \text{InvNorm}(.0089) = -2.37$

Express the confidence interval in the form of $\hat{p} \pm E$.

2) $0.02 < p < 0.48$

2) B

A) $\hat{p} = 0.25 - 0.23$ B) $\hat{p} = 0.25 \pm 0.23$ C) $\hat{p} = 0.23 \pm 0.5$ D) $\hat{p} = 0.25 \pm 0.5$

$E = \frac{(0.48-0.02)}{2} = .23$

$\hat{p} = \frac{(0.48+.02)}{2} = .25$

$\Rightarrow \hat{p} = 0.25 \pm 0.23$

Use the given degree of confidence and sample data to construct a confidence interval for the population proportion p.

3) $n = 58$, $x = 28$; 95 percent

3) D

A) $0.375 < p < 0.591$ B) $0.374 < p < 0.592$

C) $0.353 < p < 0.613$ D) $0.354 < p < 0.612$

STAT → TESTS → OPTION A:

$x = 28$

$n = 58$

95% CI

Calculate $p \in (.354, .612)$