Name _____ KEY _____

Instructions: Answer each question completely. Show all work for any computational questions.

1. In 2006, 75.9% of first-year college students responded to a national survey said that they used the Internet frequently for research or homework. Administrators at a particular university decided to survey their own students to see if they were typical or used the Internet more often. They find that 168 of 200 students of their sample said they used the Internet frequently for research or homework. Conduct a hypothesis test to see if there is enough evidence to think that their students use the Internet more often. Use a 0.05 significance level.

H_0: $p = .759$ H_a: $p > .759$

1 Prop Z Test
$P_0 = .759$
$X = 168$
$n = 200$
Prop $> P_0$

What is the P-value you obtain?

$p = .0036991116$

Do you reject the null hypothesis or fail to reject the null hypothesis?

reject H_0

2. How can a result be statistically significant without being practically important?

very large sample sizes can make small differences unlikely statistically, but may not be large enough to matter because small differences will tend to matter little in the real world.

3. Describe an example of a situation in which using a lower significance level than 0.05 would be better.

if there is more danger in being wrong, for instance, if you think the water might be radioactive, you might want to be less likely to make a mistake than $\frac{1}{20}$ (5%)