

Math 110
Spring, 2009

Name _____
Calculator: _____

Homework # 12
Due Monday, May 5
No Late Papers Accepted! No Excuses!

1. State the claim mathematically. Write the null and alternative hypothesis. Identify the test as right-tailed, left-tailed, or two-tailed.
 - a) A light bulb manufacturer claims that the mean life of a certain type of light bulb is more than 750 hours.

 - b) A research organization reports that 9% of all adult grocery shoppers in the U. S. never buy the store brand.

 - c) A study claims that the mean survival time for certain cancer patients treated immediately with chemotherapy and radiation is 24 months.

2. Write sentences describing type I and type II errors for hypothesis test of the indicated claim.

A car dealer claims that at least 24% of its new customers will return to buy their next car.

3. In the *Journal of the American Dietetic Association*, it was reported that 54% of kids said that they had a snack after school. A random sample of 60 kids was selected, and 36 said that they had a snack after school. At the 1% significance level, test the claim of the journal. On the basis of the results, should parents be concerned about their children eating a healthy snack? If you made an error, what type of error did you make? What could be the consequences of that error?