HYPOTHESIS TESTING: PROPORTION

TEXT:

LAST NAME	FIRST NAME	DATE

1 (5 points)**.** Past studies have shown that newborn human babies are more likely to be boys than girls. A random sample found 13,173 boys were born among 25,468 newborn children. Can this sample serve as the evidence that the birth of boys is more common than the birth of girls in the entire population? Use $\alpha = 0.02$.

(a) H_0 : H_1 :

(b) Find the point estimate(s) for the population parameter(s).

(c) Find the p-value of the test.

(d) State the conclusion.

2 (5 points)**.** A random sample of 80 graduate students shows that 22 students have shopped online in the past year. Is there enough evidence to show that the true population proportion is greater than 60%? Conduct the test at 10% level of significance.

(a) H_0 : H_1 :

(b) Find the point estimate(s) for the population parameter(s).

(c) Find the p-value of the test.

(d) State the conclusion.

3 (5 points)**.** Marketers believe that 92% of adults in the United States own a cell phone. A cell phone manufacturer believes that number is actually lower. 200 American adults are surveyed, of which, 174 report having cell phones. Use a 5% level of significance.

(a) H_0 : H_1 :

(b) Find the point estimate(s) for the population parameter(s).

(c) Find the p-value of the test.

(d) State the conclusion.

4 (5 points)**.** Joon believes that 50% of first-time brides in the United States are younger than their grooms. She performs a hypothesis test to determine if the percentage is the same or different from 50%. Joon samples 100 first-time brides and 53 reply that they are younger than their grooms. For the hypothesis test, she uses a 1% level of significance.

(a) H_0 : H_1 :

(b) Find the point estimate(s) for the population parameter(s).

(c) Find the p-value of the test.

(d) State the conclusion.