

Table Number: _____

Group Name: _____

Group Members: _____

HYPOTHESIS TESTING

A milk producer claims that less than 32% of its customers drink another brand of milk on a regular basis. A random sample of 100 customers yielded 21 who did in fact drink another brand of milk on a regular basis. Do these sample results support the producer's claim? (Use a level of significance of 0.05.)

1. Check if the CLT conditions are satisfied in this situation.
2. What are the null and alternative hypotheses? State the hypotheses using the proper notation.

H_0 :

H_a :

3. Find the standard error (SE) and compute the Z-statistic. Please show your work!

SE =

z =

4. Using the technology to calculate the p-value.

p =

5. Should we reject or fail to reject the null hypothesis? Write a sentence of two to interpret your conclusion.

REJECT THE NULL HYPOTHESIS DO NOT REJECT THE NULL HYPOTHESES (Circle one)

Interpret conclusion:

The NCHS report indicated that in 2002 the prevalence of cigarette smoking among American adults was 21.1%. Data on prevalent smoking in $n=3,536$ participants who attended the seventh examination of the Offspring in the Framingham Heart Study indicated that $482/3,536 = 13.6\%$ of the respondents were currently smoking at the time of the exam. Suppose we want to assess whether the prevalence of smoking is lower in the Framingham Offspring sample given the focus on cardiovascular health in that community. Is there evidence of a statistically lower prevalence of smoking in the Framingham Offspring study as compared to the prevalence among all Americans?

6. Check if the CLT conditions are satisfied in this situation.

7. What are the null and alternative hypotheses? State the hypotheses using the proper notation.

$H_o :$

$H_a :$

8. Find the standard error (SE) and compute the Z-statistic. Please show your work!

$SE =$

$z =$

9. Using the technology to calculate the p-value.

$p =$

10. Should we reject or fail to reject the null hypothesis? Write a sentence of two to interpret your conclusion.

REJECT THE NULL HYPOTHESIS DO NOT REJECT THE NULL HYPOTHESES (Circle one)

Interpret conclusion: