1. Given:  \( x = 85, n = 200, H_1 : p > 0.40, \alpha = 0.01 \), claim: \( H_1 \\
(a) (2 \text{ points}) \) Clearly state \( H_0 \) and \( H_1 \), and identify the type of test.
\[
H_0 : \text{ } \\
H_1 : \text{ }
\]
(b) (2 points) Find and name all related critical values, draw the distribution, and clearly mark and shade the critical region(s).

(c) (2 points) Find the computed test statistic and the P-value.
\[
\text{C.T.S. : } \\
\text{P-Value : }
\]
(d) (2 points) Use non-statistical terminology to express your final conclusion about the claim.

2. (2 points) Given C.T.S. \( z = 2.349 \), and Right-Tail Test. Find the corresponding \( p \)-value. \text{Drawing & Shading Required}
3. It has been reported that 65% of college students prefer e-textbooks over the traditional textbooks. A local agency randomly selected 320 college students and discovered that 215 of them share the same view. Test the validity of the report at $\alpha = 0.01$ by using the data collected by the local agency.

(a) (3 points) Clearly state $H_0$ and $H_1$, and identify the claim and type of test.

$H_0 : $ ______________________

$H_1 : $ ______________________

(b) (2 points) Find and name all related critical values, draw the distribution, and clearly mark and shade the critical region(s).

(c) (2 points) Find the computed test statistic and the P-value.

C.T.S. : ________________

P-Value : ________________

(d) (2 points) Use non-statistical terminology to express your final conclusion about the claim.

(d) ________________

4. Find the corresponding $p$-value. Drawing & Shading Required

(a) (2 points) Given: C.T.S. $z = -1.835$, and Left-Tail Test.

(a) ________________

(b) (2 points) Given: C.T.S. $z = 1.835$, and Two-Tail Test.

(b) ________________
5. Given: \( \bar{x} = 123, n = 63, \sigma = 10.75, H_1 : \mu \neq 115, \alpha = 0.04 \), claim: \( H_0 \)

(a) (2 points) Clearly state \( H_0 \) and \( H_1 \), and identify the type of test.

\[ H_0 : \] ________________
\[ H_1 : \] ________________

(b) (2 points) Find and name all related critical values, draw the distribution, and clearly mark and shade the critical region(s).

(c) (2 points) Find the computed test statistic and the P-value.

\[ \text{C.T.S.} : \] ________________ \hspace{2cm} \[ \text{P-Value} : \] ________________

(d) (2 points) Use non-statistical terminology to express your final conclusion about the claim.

6. Find the corresponding \( p \)-value. Drawing & Shading Required

(a) (2 points) Given: C.T.S. \( t = 2.035, df = 19 \), and Right-Tail Test.

\[ \] ________________

(b) (2 points) Given: C.T.S. \( t = -2.035, df = 19 \), and Two-Tail Test.
7. CNN claims that average house prices in southern California has dropped and it is now below $430,000. A local real estate agency randomly selected 75 houses recently sold in southern California and discovered that the mean price of these houses was $415,700. Test the claim made by CNN at $\alpha = 0.05$ by using the data collected by the local real estate agency. Assume that the standard deviation of all house prices in southern California is $25,000.

(a) (3 points) Clearly state $H_0$ and $H_1$, identify the claim and type of test.

$$H_0 : \mu = 430,000$$
$$H_1 : \mu < 430,000$$

(b) (2 points) Find and name all related critical values, draw the distribution, and clearly mark and shade the critical region(s).

(c) (2 points) Find the computed test statistic and the P-value.

C.T.S. : \_

P-Value : \_

(d) (2 points) Use non-statistical terminology to state your final conclusion about the claim.

8. Given: $\bar{x} = 82.5, n = 20, s = 7.45, H_1 : \mu > 80, \alpha = 0.05$, claim: $H_1$

(a) (2 points) Find and name all related critical values, draw the distribution, and clearly mark and shade the critical region(s).

(b) (2 points) Find the computed test statistic and the P-value.

C.T.S. : \_

P-Value : \_

(c) (2 points) Use non-statistical terminology to express your final conclusion about the claim.