Name:
Elementary Statistics

Date:____

HW 8.2 Part 2

- 1. A formal hypothesis test is to be conducted using the claim that the mean body temperature is equal to 98.6 degrees fahrenheit.
 - a. What is the null hypothesis, and how is it denoted?
 - b. What is the alternative hypothesis, and how is it denoted?
 - c. What are the possible conclusions that can be made about the null hypothesis?
 - d. Is it possible to conclude that "there is sufficient evidence to support the claim that the mean body temperature is equal to 98.6 degrees fahrenheit"?

In problems 2-4, assume that the significance level is $\alpha = 0.05$. Use the given statement to find the critical value.

- 2. Given the original claim, $\Box_1 : \Box \neq 0.25$ and the test statistic is found to be z = -1.23.
 - a. What is the value of α ?
 - b. Is the test two-tailed, left-tailed, or right-tailed?
 - c. What are the critical value(s)?

- d. Does the test statistic fall inside the critical region?
- e. Should we reject the null hypothesis or fail to reject the null hypothesis?
- f. What is the written conclusion from the table based on the original claim and your answer to part e?
- 3. Given the original claim, $\square_1: \square < 0.6$ and the test statistic is found to be z = -3.00. a. What is the value of α ?
 - b. Is the test two-tailed, left-tailed, or right-tailed?
 - c. What is the critical value?

- d. Does the test statistic fall inside the critical region?
- e. Should we reject the null hypothesis or fail to reject the null hypothesis?
- f. What is the written conclusion from the table based on the original claim and your answer to part e?

- 4. Given the original claim, $\square_0: \square = 7/8$ and the test statistic is found to be z = 2.88. a. What is the value of α ?
 - b. Is the test two-tailed, left-tailed, or right-tailed?
 - c. What is the critical value?

- d. Does the test statistic fall inside the critical region?
- e. Should we reject the null hypothesis or fail to reject the null hypothesis?
- f. What is the written conclusion from the table based on the original claim and your answer to part e?