INTRODUCTION TO HYPOTHESIS TESTING

Name _____ **Date** _____ **Period** _____

In Exercises 1–6, use the given statement to represent a claim. Write its complement and state which is H_0 and which is H_a

1. $\mu \leq 375$

2. $\mu = 82$

3. $p < 0.205$

4. $\mu \neq 150{,}020$

5. $\sigma > 1.9$

6. $p \geq 0.64$

In Exercises 7–10, do the following.

a) State the null and alternative hypotheses, and identify which represents the claim.
b) Determine when a type I or type II error occurs for a hypothesis test of the claim.
c) Determine whether the hypothesis test is left-tailed, right-tailed, or two-tailed. Explain your reasoning.
d) Explain how you should interpret a decision that rejects the null hypothesis.
e) Explain how you should interpret a decision that fails to reject the null hypothesis.

7. A news outlet reports that the proportion of Americans who support plans to order deep cuts in executive compensation at companies that have received federal bailout funds is 71%. (*Source: ABC News*)

8. An agricultural cooperative guarantees that the mean shelf life of a certain type of dried fruit is at least 400 days.

9. A soup maker says that the standard deviation of the sodium content in one serving of a certain soup is no more than 50 milligrams. (*Adapted from Consumer Reports*)

10. An energy bar maker claims that the mean number of grams of carbohydrates in one bar is less than 25.