Elementary Statistics	Name:
Study Guide 23	Class:
Due Date:	Score:

Your solutions must be consistent with class notes & resources.

Be Neat, Organized, and No Work \Leftrightarrow No Points

1. (2 points) What is the purpose of performing hypothesis testing?

2. (2 points) What are the main keywords on identifying the null hypothesis?

1. ____

2.

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3. (2 points) What are the main keywords on identifying the alternative hypothesis?

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4. What mathematical symbols do we use to express		
(a) (2 points) the null hypothesis H_0 ?		
	(a)	
(b) (2 points) the alternative hypothesis H_1 ?	(4)	
	(b)	
5. (2 points) What kind of error is		
(a) (2 points) type I error?		
	(a)	
(b) (2 points) type II error?	. ,	
	(b)	

8. (2 points) What are the type of testings when performing hypothesis testing and how do you determine that?

7. (2 points) What are the main methods when performing hypothesis testing?

9. (2 points) What are the commonly used terminologies to express the final conclusion about the claim?

- 10. Suppose I claim that the mean age of all students at college is 30 years.
 - (a) (2 points) Express H_0 and H_1 using mathematical notation, and clearly identify the claim and type of testing.

(b) (2 points) Describe a situation of Type I Error assuming H_0 is valid.

6.

7.

9.

8.

(a) _____

- 11. Suppose I claim that the proportion of all students at college that voted in the last presidential election was below 30%.
 - (a) (2 points) Express H_0 and H_1 using mathematical notation, and clearly identify the claim and type of testing.

(a) _____(b) (2 points) Describe a situation of Type II Error assuming H_0 is invalid.

12. (2 points) Suppose I claim that the standard deviation of salaries of all nurses in southern California is more than \$450. Express H_0 and H_1 using mathematical notation, and clearly identify the claim and type of testing.

12.

13. (2 points) Suppose I claim that the average monthly income of all students at college is at least \$2000. Express H_0 and H_1 using mathematical notation, and clearly identify the claim and type of testing.

14. (2 points) Suppose I claim that the proportion of all students at college that carpool to the college is at most 25%. Express H_0 and H_1 using mathematical notation, and clearly identify the claim and type of testing.

15. (2 points) What does P-Value represent? Explain.

15. _____

Drawing, Shading, Labeling, and Full TI Command Required.

16. Find the corresponding p-value for
(a) (2 points) C.T.S. z = 1.789, Right-Tail Test.

(a) ______(b) (2 points) C.T.S. t = -1.456, Left-Tail Test with df = 19.

(b) _____

17. Find the corresponding p-value for Two-Tail Test with (a) (3 points) C.T.S. z = -1.725.

(a) _____

(b) (3 points) C.T.S. t = 1.468 and df = 17.

(b) _____

"Action is the foundational key to all success." Pablo Picasso