Online Homework Package Created by : Elsit and Satya Mandal		
Course Id :Math 105	Topics in Mathematics	Semester : Summer2017
Instructor :Satya Mandal Line No : 84895		
Homework No: 28	Total Points :50	Due Date:(YYYY-MM-DD) 2017-07-27

Question-1	The mean length μ of telephone calls in a corporation is believed higher than 10 minutes. To test this, the following data on the length of calls was collected: {| 24	11	28	16	18	3	26	9	13	19	2	11	18	19	5	6	25	22	11	2	12	17 |} Perform a significance test. Here we test $$H_0 : \mu = 10$$ $$H_A : \mu > 10.$$ First compute the test statisitics.

The data table:

24	11	28	16	18	3	26	9	13	19	2
11	18	19	5	6	25	22	11	2	12	17

Answer Question-1	This is a Numerical-Answer Type Question Test Statisitics Value=
Points	5.00

Question-2	Decide if it is a Two Tail, Left Tail or Right Tail Test and compute the p-value of the collected data in Question 1.

Answer Question-2	This is a Numerical-Answer Type Question p-value =
Points	5.00

Question-3	Refer to Question 1. What would be the lowest level of significance, percent among .1, .5, 1 , 2, 3, 4, 5, 6, 7, 8, 9, 10 percent, at which you would accept that the mean weight has reduced?

Answer Question-3	This is a Numerical-Answer Type Question Lowest percent =
Points	5.00

Question-4	Refer to Question 1. At 1 percent level of significance, would you accept that that the mean length of calls is higher than 10 minutes? Write 0 if the answer is NO and 1 if answer in YES

Answer Question-4	This is a Numerical-Answer Type Question
	No or Yes
Points	5.00

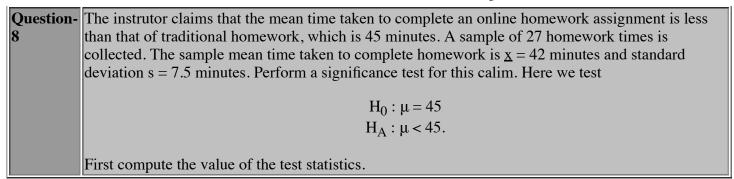| Question-5	A car manufacturer claims that the new model of the car will give more mileage per gallon than the old model. The old model gives a mean mileage of 33 miles per gallon. To test the claim, 19 cars of the new model were tested and the sample mean was found to be $\underline{x} = 35$ miles and the standard deviation s = 5.6 miles. Perform a significance test on the claim of the manufacturer. Here we test $$H_0 : \mu = 33$$ $$H_A : \mu > 33.$$ First, compute the value of the test statistics.

Answer Question-5	This is a Numerical-Answer Type Question
	Statistic value =
Points	5.00

Question-6	Decide if it is a Two Tail, Left Tail or Right Tail Test and compute the p-value of the collected data in Question 5

Answer Question-6	This is a Numerical-Answer Type Question
	p-Value =
Points	5.00

Question-7	Refer to Question 5. What would be the lowest level of significance, percent among .1, .5, 1 , 2, 3, 4, 5, 6, 7, 8, 9, 10 percent, at which you would accept that the mean weight has reduced?

Answer Question-7	This is a Numerical-Answer Type Question
	Lowest percent =
Points	5.00

Question-8	The instrutor claims that the mean time taken to complete an online homework assignment is less than that of traditional homework, which is 45 minutes. A sample of 27 homework times is collected. The sample mean time taken to complete homework is $\underline{x}$ = 42 minutes and standard deviation s = 7.5 minutes. Perform a significance test for this calim. Here we test $$H_0 : \mu = 45$$ $$H_A : \mu < 45.$$ First compute the value of the test statistics.

Answer Question-8	This is a Numerical-Answer Type Question
	Statistic Value =
Points	5.00

Question-9	Decide if it is a Two Tail, Left Tail or Right Tail Test and compute the p-value of the collected data in Question 8.

Answer Question-9	This is a Numerical-Answer Type Question
	p-Value
Points	5.00

Question-10	Refer to Question 1. What would be the lowest level of significance, percent among .1, .5, 1 , 2, 3, 4, 5, 6, 7, 8, 9, 10 percent, at which you would accept that the mean time has reduced?

Answer Question-10	This is a Numerical-Answer Type Question
	Lowest Percent =
Points	5.00

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