

Data Analysis Practice

Name _____ Period _____

This must be completed before the bell rings. Extra time will not be given. Follow directions and answer all questions completely.

The class has collected the following data for the Caffeine and *Daphnia* Heart Rate Lab:

Effects of Caffeine on the heart rate of *Daphnia magna*(beats per min.)

Control(0%)	5% Caffeine	10% Caffeine	25% Caffeine
27	29	50	0
30	32	55	0
30	34	55	0
30	40	0	0
29	35	48	0
30	35	45	0
30	35	43	0
29	34	47	0
30	32	46	0
30	33	40	0
28	33	41	0



1. Open Microsoft Excel and type your heading in cell E1.
2. Make a table to compare the heart rate of the control and 10% caffeine.
3. Perform a t test and make the output range cell A16. Make sure the width of the columns is sufficient to show all data in the cells. Print this spreadsheet once and attach it to this sheet.
Close Microsoft Excel. Quietly get your sheet from the printer.
4. After analyzing the data answer the following questions:
 - a. _____ What is the p value?
 - b. _____ Is there a significant difference between the heart rate of the control and 10%?
 - c. _____ At the .05 level of significance should the null hypothesis be accepted or rejected?
 - d. _____ At the .01 level of significance should the null hypothesis be accepted or rejected?