

AP STATISTICS SUMMER ASSIGNMENT
QUIZ GRADE

Purpose: This assignment serves as an introduction to data analysis, interpretation of results, and clear written expression of the analysis and interpretation. AP Statistics is not just working with numbers. Analyzing and interpreting the numbers correctly as well as clearly conveying in writing the results are just as important for success in this course. Equal effort in the written portion of this assignment as in the mathematical portion is required in order to receive a high score.

Due: Tuesday, August 14, 2018 at the beginning of class

Submission Type: On paper – may be typed or neatly and clearly written; a combination of both is acceptable

Instructions:

1. Read the case study below.
2. **60 points:** Calculate the mean (sum of the data values divided by the total number of data values) and the median (middle value after arranging the data values in numerical order) for each of the three groups. Supporting work must be included.
 - a) Pet (P)
 - b) Friend (F)
 - c) Control – Alone (C)
3. **40 points:** Write a paragraph (minimum of 100 words). In your own words, describe the case study and present your conclusion. A data analysis of your computations must be used as a supporting argument to your conclusion.



case study

Do Pets or Friends Help Reduce Stress?

If you are a dog lover, having your dog with you may reduce your stress level. Does having a friend with you reduce stress? To examine the effect of pets and friends in stressful situations, researchers recruited 45 women who said they were dog lovers. Fifteen women were assigned at random to each of three groups: to do a stressful task alone, with a good friend present, or with their dogs present. The stressful task was to count backward by 13s or 17s. The woman's average heart rate during the task was one measure of the effect of stress. The table below shows the data.¹

Average heart rates during stress with a pet (P), with a friend (F), and for the control group (C)							
GROUP	RATE	GROUP	RATE	GROUP	RATE	GROUP	RATE
P	69.169	P	68.862	C	84.738	C	75.477
F	99.692	C	87.231	C	84.877	C	62.646
P	70.169	P	64.169	P	58.692	P	70.077
C	80.369	C	91.754	P	79.662	F	88.015
C	87.446	C	87.785	P	69.231	F	81.600
P	75.985	F	91.354	C	73.277	F	86.985
F	83.400	F	100.877	C	84.523	F	92.492
F	102.154	C	77.800	C	70.877	P	72.262
P	86.446	P	97.538	F	89.815	P	65.446
F	80.277	P	85.000	F	98.200		
C	90.015	F	101.062	F	76.908		
C	99.046	F	97.046	P	69.538		