HOMEWORK ASSIGNMENT 5 **ROSTER NO: 8**

ACN 6312-003
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Lab Date: 10/12/2016
Due Date: 10/19/2016

Question 1

1. A motivated graduate student wanted to compare 6th, 8th, and 12th grade students' interest in math and science. She counted how many students checked out math and science encyclopedias from the school library each week. The 'interest scale' is 0 to 12(0 being no interest and 12 being highest interest in math and science).

6th grade	8th grade	12th grade
1	4	12
0	5	10
2	4	9
3	2	6
0	3	8

Report your findings in APA format.

A one-way analysis of variance revealed a statistically significant interest in math and science of 6th, 8th, and 12th grade students, $F(2,12) = 29.925$, $p < 0.001$, Alpha = .05.

Question 2

2. A researcher wants to know if city region (North versus South Dallas) and time of day (morning versus afternoon) influence number of crimes? Below are her data:

Number of Crimes:

	North Dallas	South Dallas
Morning	5 8 6 4 5	11 9 14 9 8
Afternoon	10 13 14 12 12	3 3 3 4 5

Report your results in APA format.

A 2 x 2 (City Region[North Dallas, South Dallas] x Time of Day[morning, afternoon]) analysis of variance found that the overall model accounted for a significant amount of variance in number of crimes, F(3, 16) = 28.824, p ¡0.001. In addition, the analysis failed to find a significant main effect to the time of the day, F(1, 16) = 0.00, p = 1.000, but is statistically significant of the city region F(1, 16) = 7.273, p = 0.016, there was a significant Time of day * City region interaction effect on number of crime, F(1, 16) = 79.200, p <.001. Alpha = .05.

Question 3

3. Determine if high school region (East Coast, Midwest, West Coast) and gender impact overall memory scores. Below are the data:

Memory Scores

	Male	Female
East Coast	9 7 7 5 4 4	11 13 13 12 8 9
Midwest	11 12 11 10 9 8	11 11 12 13 13 11
West Coast	7 6 6 5 8 9	8 7 7 6 7 5

Report your findings in APA format.

A 3 x 2 (School region[East Coast, Midwest, West Coast] x Gender[male, female]) analysis of variance found that the overall model accounted for a significant amount of variance in memory scores, F(5, 30) = 15.677, p ¡0.001. In addition, the analysis found a significant main effect of the school region, F(2, 30) = 22.246, p < 0.001, and significant of the gender F(1, 30) = 17.167, p < 0.001, there was a significant School region * Gender interaction effect on memory scores, F(2, 30) = 8.363, p =.001. Alpha = .05.

Attachments

Output graph of the data into SPSS.