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| Week 6:  Week 6 - W6: Assignment 2 |  |  |  |  |  |
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| **Assignment 2: Mixed Problems**   1. In a one-way ANOVA, if the test is conducted and the null hypothesis is rejected, what does this indicate? (2 pts)    * 1. All the population means are equal      2. At least one of the population means are different      3. The normal distribution should be used instead of the F-distribution to determine the critical values of the test      4. None of the above is correct 2. In a one-way ANOVA, there are three treatments with n1 = 5, n2 = 6 and n3 = 5. The rejection region for this test at the 5% level of significance is (2 pts)    * 1. *F* > 3.74      2. *F* > 4.86      3. *F* > 4.97      4. *F* > 3.81 3. The following data show samples of three chain stores in three different locations in one town and the amount of dollars spent per customer per visit. At the 0.05 level, is there a difference in among the means? (12 pts)  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | **Store A** | **Store B** | **Store C** | | 30 | 42 | 30 | | 14 | 28 | 14 | | 22 | 20 | 20 | | 18 | 35 | 16 | | 26 | 49 | 15 | | 25 | 28 |  | |  | 36 |  | |  | 24 |  | |      1. Choose a variable and collect data for at least three different groups (samples). Compare the means of the three groups using the one-way ANOVA technique. Complete the following: (16 pts)    1. Write a brief statement of purpose of the study    2. Define the population    3. State how the sample was selected    4. What a value did you use?    5. State the hypotheses    6. What was *F* test value?    7. State the decision    8. Summarize the results.   You may obtain raw data from the random number table in the appendix section of your text or from any other sources, including sources on the World Wide Web. |  |  |