You collect the following salary figures for Master’s Level Students and their salaries after 2 years at work. You are interested in whether or not people with different degrees make more or less money. The data are analyzed using an ANOVA test with the following results:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
| *Groups* | *Count* | *Sum* | *Average* | *Variance* |  |  |
| Accounting | 17 | 1389.8 | 81.75294 | 95.22515 |  |  |
| Law | 17 | 1349.2 | 79.36471 | 145.7899 |  |  |
| Finance | 17 | 1356.8 | 79.81176 | 139.1611 |  |  |
| Management | 17 | 1295.7 | 76.21765 | 184.034 |  |  |
|  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |
| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
| Between Groups | 268.3146 | 3 | 89.43819 | 0.634077 | 0.595756 | 2.748195 |
| Within Groups | 9027.364 | 64 | 141.0526 |  |  |  |
| Total | 9295.678 | 67 |  |  |  |  |

1 What are the null and experimental hypotheses for this problem?

2 Is there a significant difference between the four majors with regard to their salaries 2 years after graduation?

3 Consider a situation where the ANOVA showed that there **WAS NOT** a significant difference between the four majors. What would you recommend doing as a next step in the research to show that people with Accounting degrees make significantly more than graduates with Management-degrees?

4 Consider a situation where the ANOVA showed that there **WAS** a significant difference between the four majors. A Tukey Critical Difference was calculated to be 4.8 for these data at 95% confidence. What does this statistic tell you about the data?