Use the attached dataset to complete the following analyses:

We are studying the Supplemental Instruction program on campus (called PASS) to see if it helps students increase their final course grades. The attached dataset has their final course GPA (i.e. 4.0 = A; 3.0 = B; coded on a plus minus system). Next, we have coded their attendance in SI session as none, very few (1-3 sessions), medium (3-10 sessions), and weekly (10+ sessions). Is there a significant difference in final course grades by how often they attended SI sessions?

Create a set of hypotheses about the data (i.e. what are some comparisons you can make?): *Do not use the overall hypothesis “the means are different”.*



Would you consider these a family of hypotheses?

What is the alpha family wise given there are three comparisons?

Test the overall ANOVA (cut and paste your ANOVA box here).

Write an APA style sentence saying if there was a significant difference in the means (just need ANOVA values – no means):

Run your hypotheses tests listed above, and fill in the following table by listing which comparisons are significant (cut and paste the giant SPSS boxes, then mark significant boxes in the table with a star):

|  |  |  |  |
| --- | --- | --- | --- |
|  | Comparison 1 | Comparison 2 | Comparison 3 |
| Bonferroni |  |  |  |
| Sidak-Bonferroni |  |  |  |
| Tukey HSD |  |  |  |
| Fisher-Hayter\* |  |  |  |
| SNK |  |  |  |
| REGW |  |  |  |
| Scheffe |  |  |  |
| Independent t-test |  |  |  |

\*calculate the mean difference cut off below, then compare those to the actual mean differences found in the SPSS output.

What is the corrected alpha for Bonferroni?

What is the corrected alpha for Sidak-Bonferroni?

What is the mean difference cut off for Tukey (Dtukey)? Show your “work” so we can figure out how you got your number.

What is the mean difference cut off for Fisher-Hayter?

What is the new cut off *F* value for Scheffe?

We’ve left out Dunnett’s test – when would that test be appropriate?