Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Activity 11-1**

1. \_\_\_\_\_ Independence of data

\_\_\_\_\_ Appropriate IV and DV measurement

\_\_\_\_\_ Homogeneity of variance

\_\_\_\_\_ Normality

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. M0 books = \_\_\_\_\_, SS0 books = \_\_\_\_\_, SD0 books = \_\_\_\_\_
9. Show work

SSwithin(error) =

1. Show work

MS within(error) =

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_ Training participants to record their actual reading times more accurately

\_\_\_\_\_ Make sure all parents participating in the study completed high school

\_\_\_\_\_ Include participants from many different cultural backgrounds

\_\_\_\_\_ Have many different experimenters train participants how to record their reading times

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. Show work

SSmeans =

1. Show work

SSbetween =

1. Show work

MSbetween =

1. Show work

*F* =

1. In this case, this F-ratio indicates that there is \_\_\_\_\_\_\_\_\_\_\_ times more between group variance than there is within group variance.
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. Show work

HSD =

1. 40-book vs. 20-book = 30 – 28 = 2

40-book vs. 0-book =

20-book vs. 0-book =

1. \_\_\_\_\_
2. 20-book vs. 0-book

*Mean Difference Pooled Variance d*

1. \_\_\_\_\_

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source of Variance | *SS* | *df* | *MS* | *F* |  |
| Between treatments | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_\_ |
| Within treatments(Error) | \_\_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_ |  |  |
| Total | \_\_\_\_\_ | \_\_\_\_\_ |  |  |  |

1. Did you find all of the values in the SPSS output? Yes No

Question 40 in on the next page.

1. A oneway ANOVA with Number of Books as the independent variable and Reading Time as the dependent variable revealed a significant effect, *F* (1, \_\_\_) = \_\_\_\_\_\_, *p* = \_\_\_\_\_\_, *MSE* = 11.00, = \_\_\_\_\_\_. The means and standard deviations for each condition are in Table 1. Reading times were significantly higher amongst families given 40 books compared to \_\_\_\_\_ books. The difference between 20 and 0 books was not significant, nor was the difference between the 20 and 40. However, all effect sizes were medium-large or large, suggesting that this study should be replicated with a larger sample. These results are in Table 2. Overall, the results of this pilot study suggest that running a larger study is justified**.**

Table 1. Means and Standard Deviations for Each Condition

|  |  |
| --- | --- |
| Condition | Mean(SD) |
| 0 Books | 24.00 (3.39) |
| 20 Books | 28.00 (3.16) |
| 40 Books | \_\_\_\_\_\_\_\_(\_\_\_\_\_\_\_\_) |

Table 2. Tukey HSD Post Hoc Results and Effect Sizes

|  |  |  |  |
| --- | --- | --- | --- |
| Comparison | Mean difference | *p* | *d* |
| 0 Books vs 20 Books | 4.00 | .18 | \_\_\_\_\_ |
| 0 Books vs 40 Books | 6.00 | .04 | 1.77 |
| 20 Books vs 40 Books | 2.00 | \_\_\_\_ | .61 |