14. Foofy obtained a significant *F*obt  from an experiment with five levels. She therefore concludes that changing each condition of the independent variable. (a) Is she Correct? Why or why not? (b) What must she do now?

16. A report says that the between-subjects factor of participants’ salary produced significant differences in self-esteem. (a) What does this tell you about the design? (b) What does it tell you about the results?

18. A researcher investigated the number of viral infections people contract as a function of the amount of stress they experienced during a 6-month period. She obtained the following data:

|  |  |  |  |
| --- | --- | --- | --- |
| Amount of Stress | | | |
| Negligible Stress | Minimal Stress | Moderate Stress | Severe Stress |
| 2 | 4 | 6 | 5 |
| 1 | 3 | 5 | 7 |
| 4 | 2 | 7 | 8 |
| 1 | 3 | 5 | 4 |

1. What are H0 and Ha? (b) Compute *F*obt and complete the ANOVA summary table. (c) With α = .05, what is *F*crit? (d) Report your statistical results. € Perform the appropriate post hoc comparisons. (f) What do you conclude about the study? (g) Describe the effect size and interpret it. (h) Estimate the value of µ that is likely to be found in the severe stress condition.

20. In a study in which *k* = 3,  *n* = 21, (bar)X1 =45.3, (bar)X2 = 16.9, and (bar)X3 = 8.2, you compute the following sums of squares:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Source | Sum of Squares | df | Mean Square | F |
| Between | 147.32 | \_\_\_\_\_\_\_ | \_\_\_\_\_\_\_ | \_\_\_\_\_ |
| Within | 862.99 | \_\_\_\_\_\_ | \_\_\_\_\_\_\_ |  |
| Total | 1010.31 | \_\_\_\_\_\_ |  |  |

1. Complete the ANOVA summary table. (b) With α = .05 what do you conclude about *F*obt? (c) Report your results in the correct format. (d) Perform the appropriate post hoc comparisons. What you do you conclude about this relationship? € What is the effect size in this study, and what does this tell you about the influence of the independent variable?