

Chapter 8 Problems

1. a. For $\alpha = .05$, $df_A = 1$, and $df_{S/A} = 16$, $F_{crit} = 4.49$. We will reject H_0 when $F > 4.49$. Because our obtained F , 4.65, is larger than F_{crit} , our result is significant. We have good evidence that the null hypothesis is false.

b. For $\alpha = .10$, $df_A = 1$, and $df_{S/A} = 16$, $F_{crit} = 3.05$. We will reject H_0 when $F > 3.05$. Our F of 4.65 is significant.

2. a. $F = (r^2/df_{reg}) / [(1-r^2)/df_{res}] = [(-.4743)^2/1] / [(1-.4743^2)/(18-2)] = 4.64$.

b. For $\alpha = .05$, $df_{reg} = 1$, and $df_{res} = 16$, $F_{crit} = 4.49$. We will reject H_0 when $F > 4.49$. Our F of 4.64 is significant.

c. The F values from the ANOVA and the correlational analysis are equal within rounding error.