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### Additional Empirical Exercise 5.3

Using the data set **CollegeDistance** described in Empirical Exercise AEE4.3, run a regression of years of completed education ( $ED$ ) on distance to the nearest college ( $Dist$ ) and carry out the following exercises.

- a. Is the estimated regression slope coefficient statistically significant? That is, can you reject the null hypothesis  $H_0: \beta_1 = 0$  versus a two-sided alternative at the 10%, 5%, or 1% significance level? What is the  $p$ -value associated with coefficient's  $t$ -statistic?
- b. Construct a 95% confidence interval for the slope coefficient.
- c. Run the regression using data only on females and repeat (b).
- d. Run the regression using data only on males and repeat (b).
- e. Is the effect of distance on completed years of education different for men than for women? (*Hint*: See Exercise 5.15.)