

## 4.4: ANOVA F Test in Multiple Linear Regression

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### Topic 4.4: ANOVA $F$ Test in Multiple Linear Regression

Read Section 3.3.1 of your textbook. As you read, take notes on the following.

1. Consider the ANOVA  $F$  test in a multiple linear regression setting.
  - In your own words, describe what the ANOVA  $F$  test is used for.
  - Write down the null and alternative hypotheses associated with an ANOVA  $F$  test.
  - How do we calculate the ANOVA  $F$  statistic? What distribution is the calculated  $F$  statistic compared to?
2. How is the ANOVA table different in MLR compared to SLR?
3. Compare and contrast the  $R^2$  and  $R^2_{adj}$ . What happens when a predictor variable is added?