

Fox Module 18 Outliers and Influence advanced

- Studentized residuals
- Measuring influence

Read Section 11.3, “Detecting outliers: studentized residuals,” on pages 246 through the first line of page 247. You are not responsible for equations 11.2, 11.3, or the text from this section after the first line on page 247.

Know the first equation in this section relating the variance of the residual to the variance of the error term and equation 11.1 at the bottom of page 246. The final exam compares variances of residuals and error terms.

The error term is a random variable; the residual is a realization of this random variable. It might seem that they should have the same variance. But residuals twist the regression line, so their variance is subdued. The homework assignment gives an illustration; the final exam problems are similar.

Read Section 11.4, “Measuring influence,” from the top of page 250 through the gray box at the bottom of the page. Know what a DFBETA is and what Cook D statistic measures. You are not responsible for the rest of this section.

The final exam questions on Section 11.4 focus on the concepts. If you understand what these items deal with, you can answer the final exam questions.