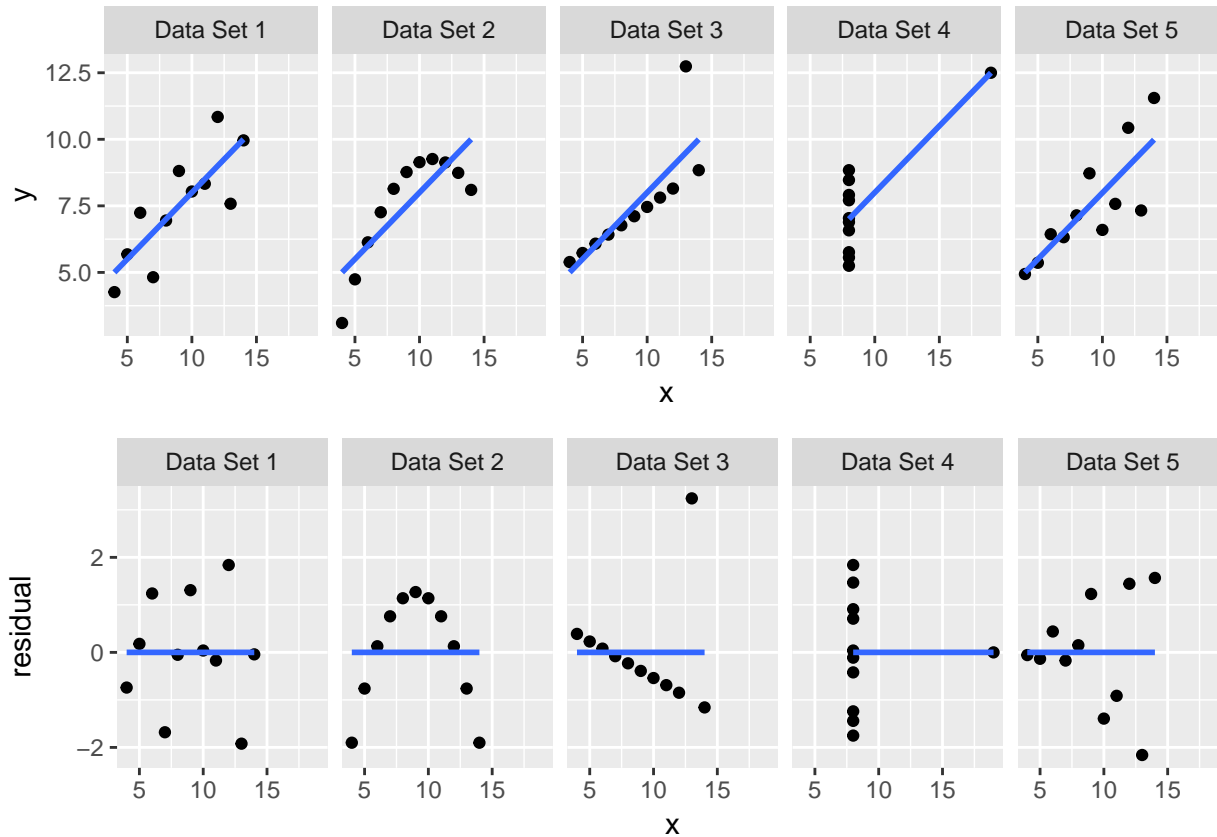# Anscombe's Data

All 5 Have Essentially the Same Estimated Intercept, Slope, R^2, and Residual Standard Deviation!

- Brief reminder of **conditions for linear regression**:
  - **Linear** relationship
  - **Independent** observations
  - **Normally** distributed residuals (or large enough sample size)
  - **Equal variability** of residuals
  - No **outliers**
- How do they check out?
  - Data Set 1 looks OK!
  - Data Set 2 not a linear relationship!
  - Data Sets 3 and 4 have outliers (or influential observations)!
  - Data Set 5 has a lack of equal variance!
- **Conclusion: It's critical to look at plots!!!!!**