Chapter 9

Inferences Based on Two Samples

9.1 z-Tests
9.2 The Two-Sample t-Test
9.4 Difference Between Population Proportions
9.5 Two-Population Variances

Example

Analysis of a random sample consisting of 20 specimens of cold-rolled steel to determine yield strengths resulted in a sample average strength of 29.8 ksi. A second random sample of 25 two-sided galvanized steel specimens gave a sample average strength of 34.7 ksi.

Assuming that the two yield-strength distributions are normal with standard deviations 4 and 5, respectively, does the data indicate the corresponding true average yield strengths are different? Use significance level 0.01.