Testing differences between two samples with similar variance

If the F test for variance does not test significantly different you can calculate a pooled variance as:

\[ s_p^2 = \frac{df_1 s_1^2 + df_2 s_2^2}{df_1 + df_2} \]

Testing the difference between two means

The means of two samples can be tested for difference by:

\[ t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_p^2}{n_1} + \frac{s_p^2}{n_2}}} \]

Also See:

Chapter 9 - Significance of a Difference between Two Means pages 108-124 in:


Chapter 9 - Two-Sample Hypotheses pages 126-130 in: