Comparing Two Populations Standard Deviations

F Distribution & TI

Tips & Notations:

1. Always identify Sample 1 & Sample 2 by comparing their standard deviations. Sample 1 standard deviation must be larger than sample 2 standard deviation.
2. Set up your Two-Column chart:

Sample 1 (Numerator)	Sample 2 (Denominator)
$\bar{x}_1 =$	$\bar{x}_2 =$
$s_1 =$	$s_2 =$
$n_1 =$	$n_2 =$
N$df = n_1 - 1$	$Ddf = n_2 - 1$

Make sure that $s_1 > s_2$ before proceed.

Hypothesis Testing For σ_1 & σ_2 :

$$H_0 : \sigma_1 = \sigma_2$$
$$H_1 : \sigma_1 \neq \sigma_2$$

1. Finding Critical Values Using TI: PRGM > FVAL > ENTER (Twice)
2. Finding C.T.S. & P-Value Using TI: STAT > TESTS > 2-SampFTest
3. To Pool or Not To Pool:
   - When H_0 is valid $\Longrightarrow$ Pooled: YES & $df = n_1 + n_2 - 2$
   - When H_1 is valid $\Longrightarrow$ Pooled: NO & $df =$ Smaller Sample Size $- 1$