Using Excel to find the p-values for test statistics

There is no table to look up p-values for test statistics. Instead, you must use Excel to calculate tail probabilities for test statistics.

1. For an **upper tail test** with the test statistic = , numerator degrees of freedom = and denominator degrees of freedom = , use the f.dist.rt function in Excel to find the upper tail p-value.

Type into a cell in Excel: **=f.dist.rt()** and hit Enter. The resulting number is the upper tail p-value for .

*Example*. Find the upper tail p-value of

Type this into Excel: =f.dist.rt(1.12,62,75) and you get upper tail p-value = 0.3179

1. For a **two-tailed test** with the test statistic = and numerator degrees of freedom = and denominator degrees of freedom , find the upper tail probability of using the f.dist.rt function and multiply it by two.

Type into a cell in Excel: **=2\*f.dist.rt()** and hit Enter. The resulting number is the two-tailed p-value of .

*Example.* Find the two-tailed p-value of

Type this into Excel: =2\*f.dist.rt(2.37,18,22) and you get the two-tailed p-value = 0.05622