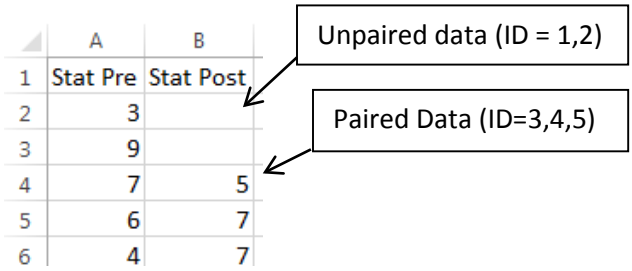
Dependent t-test in Excel 2016

You should already have the Excel tutorial file open and the Stat Pre, and Stat Post variables copied into a new sheet.

1. Remove any unpaired data from the sample. Unpaired data is an observation that contains at least one missing value for either Stat Pre or Stat Post
2. In the figure to the right, observations 1 and 2 are missing values for Stat Post, so you will need to delete observations 1 and 2. There are other unpaired observations in the sample, so make sure to go through the entire dataset and delete all unpaired data.



3. Choose the Data tab and click Data Analysis in the top right hand corner
4. In the Data Analysis menu, select 't-test: Paired Two Sample for Means' and click OK
5. In the 'Variable 1 Range' box, enter the range of cells for the Stat Pre column, including the variable name
6. In the 'Variable 2 Range' box, enter the range of cells for the Stat Post column, including the variable name
7. Check the 'Labels' box
8. Choose the 'Output Range' option and enter a cell range where excel will put the output (for example, use cells E2:K15) and click OK

The output after completing steps 1-8 should appear as follows:

t-Test: Paired Two Sample for Means

	Stat Pre	*Stat Post*
Mean	5.594202899	6.898550725
Variance	3.656436488	1.827791986
Observations	69	69
Pearson Correlation	-0.243699156	
Hypothesized Mean Difference	0	
df	68	
t Stat	-4.172067035	
P(T<=t) one-tail	4.38053E-05	
t Critical one-tail	1.667572281	
P(T<=t) two-tail	8.76105E-05	
t Critical two-tail	1.995468931	

t-statistic

p-value for a two sided null

Optional Number Formatting: The p-value for the two sided null is so small that Excel has displayed it using Scientific Notation. Use the cell formatting menu (keyboard shortcut: Ctrl+1)

to change the number of decimals to 5 so that excel will display the value without using Scientific Notation.