TECHNOLOGY INSTRUCTION

Confidence Intervals and Hypothesis Tests for Two Populations

Excel

Example 10-12

	Before	After
Adult # 1	210	193
Adult # 2	180	186
Adult # 3	195	186
Adult # 4	220	223
Adult # 5	231	220
Adult # 6	199	183
Adult # 7	224	233

Upload the paired data in Excel

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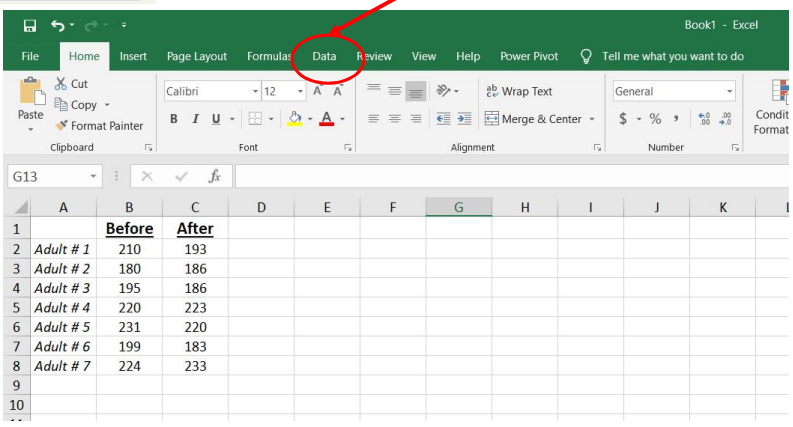
Select "Data" tab



	A	B	C	D	E	F	G	H	I	J	K
1		Before	After								
2	*Adult # 1*	210	193								
3	*Adult # 2*	180	186								
4	*Adult # 3*	195	186								
5	*Adult # 4*	220	223								
6	*Adult # 5*	231	220								
7	*Adult # 6*	199	183								
8	*Adult # 7*	224	233								
9											
10											

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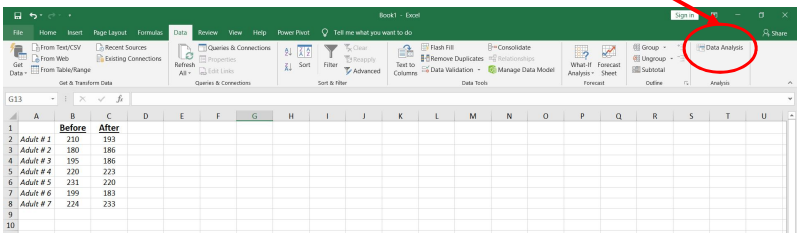
Select "Data Analysis"



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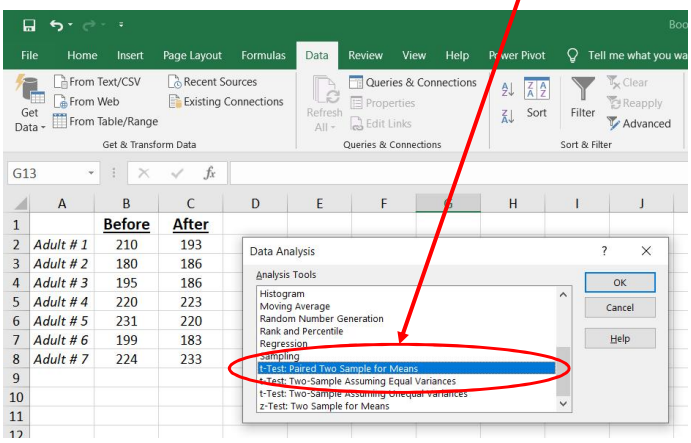
Select your desired test



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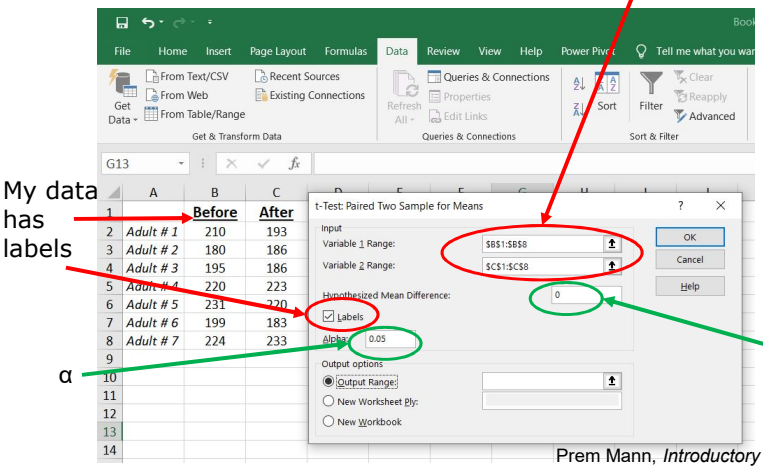
Select your paired data



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Test Statistic: observed value of *t*

t-Test: Paired Two Sample for Means

	Before	After
Mean	208.4285714	203.4285714
Variance	327.6190476	444.2857143
Observations	7	7
Pearson Correlation	0.859160448	
Hypothesized Mean Difference	0	
df	6	
t Stat	1.226498265	
P(T<=t) one-tail	0.13297784	
t Critical one-tail	1.943180281	
P(T<=t) two-tail	0.26595568	
t Critical two-tail	2.446911851	

Critical value of *t* of a one tailed (Left-tailed or Right tailed) test

Critical value of *t* of a Two-tailed test

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t-Test: Paired Two Sample for Means

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p-value of a one tailed (Left-tailed or Right tailed) test

p-value of *t* of a Two-tailed test

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