STA 205 STATCRUNCH EXAMPLES FOR COMPARING TWO MEANS: INDEPENDENT SAMPLES

THE CALCULATIONS FOR A CONFIDENCE INTERVAL

The data for this example are from Exercise 6, page 341 of the text.
To obtain a 95% confidence interval, use

Stat ► T Statistics ► Two Sample ► with data
Sample 1 in: Control
Sample 2 in: Experimental
☐ Pool Variances (This box is NOT checked)
Next ► ◉ Confidence Interval
Level: 0.95
Calculate

95% confidence interval results:
μ_1 : mean of Control
μ_2 : mean of Experimental
$\mu_1 - \mu_2$: mean difference
(without pooled variances)

Difference	Sample Mean	Std. Err.	DF	L. Limit	U. Limit
m1 - m2	2.29	0.94039464	28.814648	0.36613944	4.2138605

THE CALCULATIONS FOR A TEST OF HYPOTHESIS

The data for this example are from Exercise 5, page 341 of the text.
To obtain the test statistic and the p-value of the desired test, use

Stat ► T Statistics ► Two Sample ► with data
Sample 1 in: Tutoring
Sample 2 in: Control
☐ Pool Variances (This box is NOT checked)
Next ► ◉ Hypothesis Test
Null: Mean = 0
Alternative: >
Calculate

Hypothesis test results:
μ_1 : mean of Tutoring
μ_2 : mean of Control
$\mu_1 - \mu_2$: mean difference
H_0 : $\mu_1 - \mu_2 = 0$
H_A : $\mu_1 - \mu_2 > 0$
(without pooled variances)

Difference	Sample Mean	Std. Err.	DF	T-Stat	P-value
$\mu_1 - \mu_2$	6.427778	1.6352522	34.711273	3.930756	0.0002