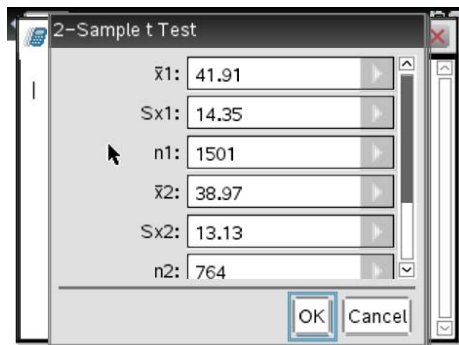


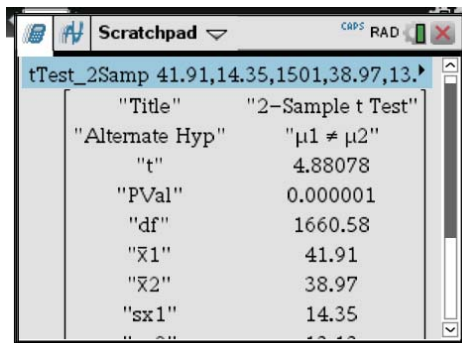
26. Two-sample t tests on the calculator

You can use the two-sample t test option on the TI-Nspire to do the calculations for a significance test about the difference between two means. Let's use the sample statistics from the "A Longer Work Week?" example from page 657.

- Press $\left[\frac{\square}{\square} \right]$ (or $\left[\frac{\square}{\square} \right]$ on **A**) to insert a *Calculator Scratchpad*.
- Press $\left[\text{menu} \right] \rightarrow \text{Statistics} \rightarrow \text{Stat Tests} \rightarrow \text{2-Sample } t \text{ test}$.
- In the first dialogue box, select *Stats* in the drop-down menu. $\left[\text{tab} \right]$ to $\left[\text{OK} \right]$ and press $\left[\text{enter} \right]$. Another dialogue box will appear.
- Enter the summary statistics as shown.



- Specify the alternative hypothesis as $H_a: \mu_1 \neq \mu_2$. $\left[\text{tab} \right]$ to $\left[\text{OK} \right]$ and press $\left[\text{enter} \right]$.

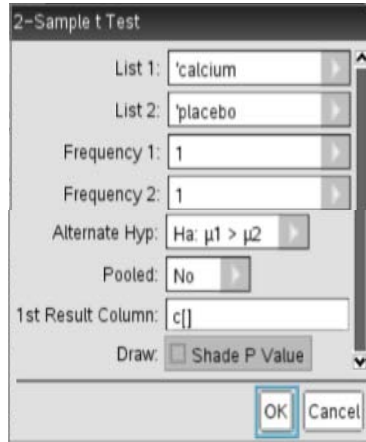


You can also use the TI-Nspire to do the calculations for a significance test about the difference between two means from data. Let's review the steps using the data from "Calcium and blood pressure" on page 659.

- Start by entering the sample data into a column in a Lists & Spreadsheet page. Name column A **calcium** and enter the Group 1 data. Name column B **placebo** and enter the Group 2 data.
- Press $\left[\text{menu} \right] \rightarrow \text{Statistics} \rightarrow \text{Stats Tests} \rightarrow \text{2-Sample } t \text{ Test}$.

In the first dialogue box, select *Data* in the drop-down menu. (tab) to and press (enter).

In the next dialogue box, enter the values shown, (tab) to , and press (enter).



Note: To just “calculate,” leave the *Shade P value* option unchecked.

The results should now appear in the spreadsheet.

	calcium	placebo		
				=tTest_2S
1	7	-1	Title	2-Samp...
2	-4	12	Alternate...	$\mu_1 > \mu_2$
3	18	-1	t	1.60372
4	17	-3	PVal	0.06442
5	-3	3	df	15.5905
6	-5	-5	t	

If you check the *Shade P value* box, the appropriate *t* distribution will also be displayed, showing the same results and the shaded area corresponding to the *P*-value.

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