

## Bozeman: [Student's t-test](#)

URL: <https://www.youtube.com/watch?v=pTmLQvMM-1M>

1. William Sealy Gosset developed the t test. He worked for Guinness. Why did Guinness only allow him to publish on this test anonymously?
2. What is signal?
3. What is noise?
4. draw arrows to the different variables in the following equation to identify the meaning of each

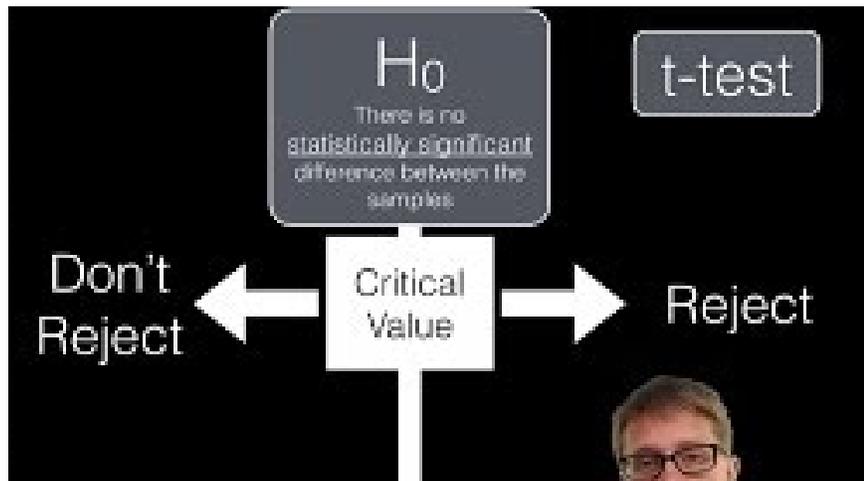
$$t = \frac{|\bar{X}_1 - \bar{X}_2|}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

5. As Mr. Anderson takes your through how to use a spreadsheet for calculations, write down notes for any part you would not remember how to do... for example: how will you calculate variance?
6. What is the null hypothesis for ALL experiments?

7. What is the null hypothesis for your heart rate lab?

8. How do you determine the critical value for your data set?

9. What does it mean to reject the null hypothesis?



10. In the spreadsheet Mr. Anderson uses to determine the t value, the equation to type into the spreadsheet is

`=ttest(array1, array2, tail, type)`

- What is array 1?
- What is array 2?
- What number did he type for tail?
- What number did he type for type?