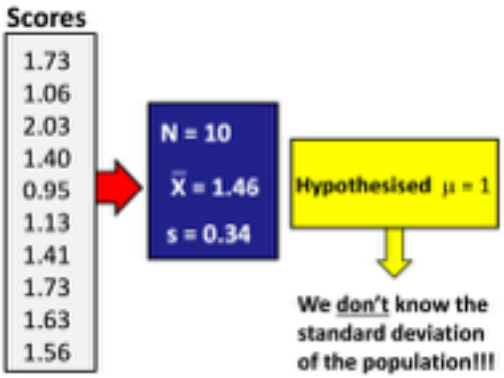
SHORT ANSWER NOTES

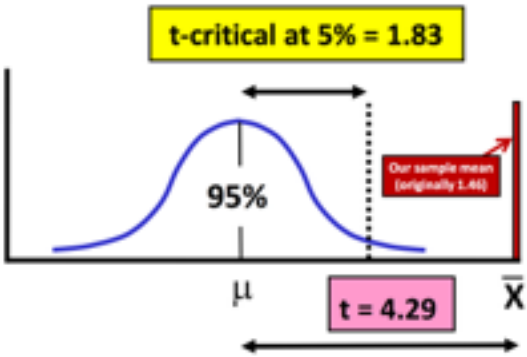
ONE-SAMPLE T-TEST

- Calculate a **sample mean** from scores collected from a group of participants
- Compare with a **hypothesised mean** (e.g., from a theory of what you believe every person ***should*** do)

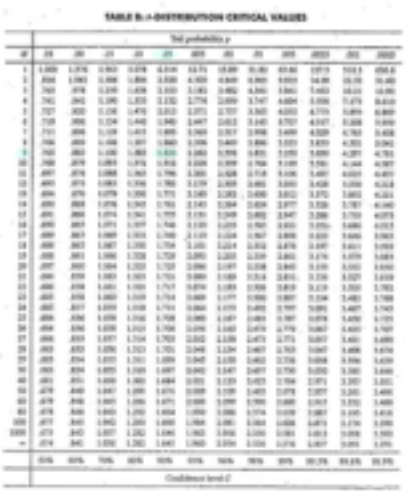


Use formula $\frac{\bar{X} - \mu}{\frac{S}{\sqrt{N}}}$

Calculation $\frac{1.46 - 1}{\frac{0.34}{\sqrt{10}}} = +4.29$

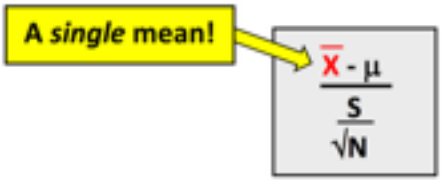


Where does 1.83 come from?



DEGREES OF FREEDOM

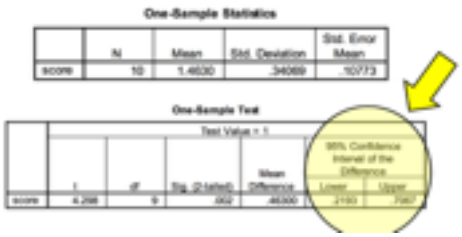
- Consider the numbers 6, 8 and 10 The mean is 8
- Question: How many of these three numbers are "free" to **vary** such that the mean stays 8?Only two!
- Thus "degrees of freedom" (**df**) = **N-1**
- In our example **df** is: **3-1 = 2**
- If you use a mean in your statistical formula, you lose a degree of freedom!



Thus "degrees of freedom" (**df**) = **N-1** = 10 – 1 = **9**

That's what we test against using the tables

If we let **SPSS** do this calculation, we would be given the t-value AND the probability



SIGNIFICANCE TESTING

- If $p < 0.05$, probability of score is less than 1 in 20 (less than 5% in population)
- We arbitrarily call this "**SIGNIFICANT**" - score is very unlikely in population
- Very likely from another population!

- if **$p < 0.05$** for a score, then it is less than the **significance** (or rejection) level
- A probability of 0.05 corresponds approx. to a z-score of 1.64
- If $z = +1.64$ away from mean, then the score is greater than 95% of the rest of the population - (vice versa).