

Let  $\bar{x} :=$  the mean of the values

(we assume  $x$  is normally distributed

$s :=$  the std. dev. of the values

$n :=$  the number of samples

$\mu :=$  the target mean

Then:

$$t := \frac{\bar{x} - \mu}{(s/\sqrt{n})}$$

$t$  is on the Student's t-distribution

with  $n-1$  degrees of freedom

$$p := Pr(T = t)$$