CI

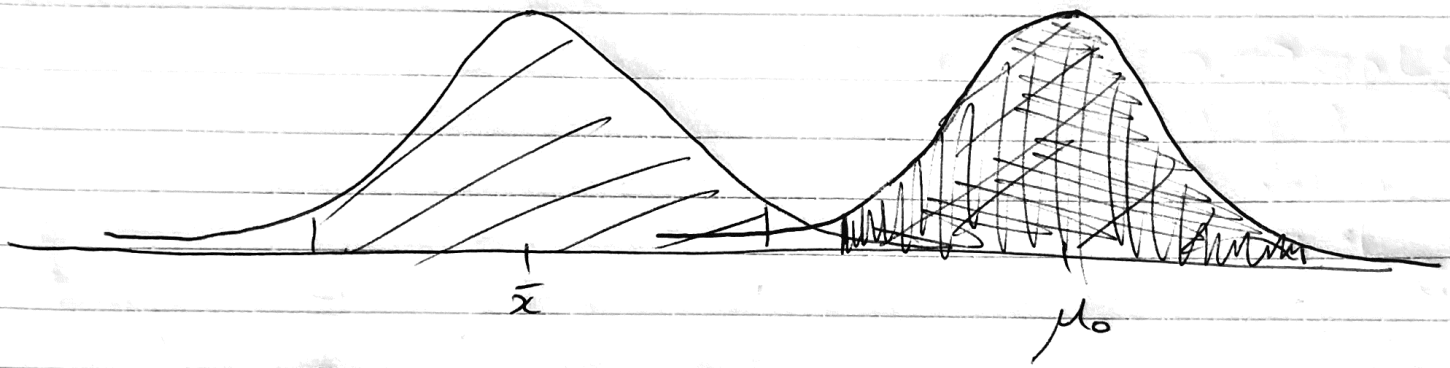
$$\bar{x} \pm c\frac{s}{\sqrt{n}}$$

(reject H_0 when μ_0 is outside the bounds)

Rejection region

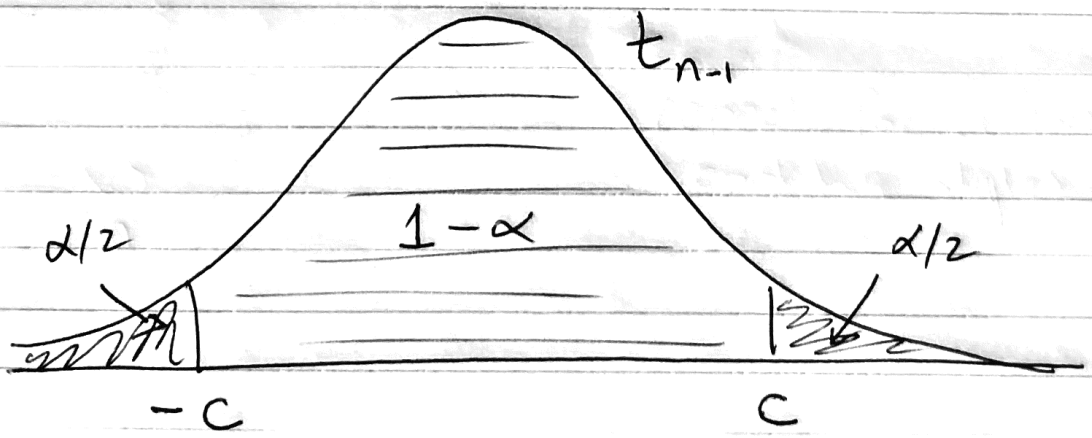
$$\mu_0 \pm c\frac{s}{\sqrt{n}}$$

(reject H_0 when $\bar{x}$ is outside the bounds)



What's c?

$$c = qt(1-\alpha/2, df)$$



Actual

	Innocent H_0 true	Guilty H_1 true
Acquit say H_0 true	✓ TP	Type II error. β FN
Convict Say H_0 false	Type I error α FP	✓ $1-\beta$ TN

$P(\text{reject } H_0 \mid H_0 \text{ true})$

$P(\text{reject } H_0 \mid H_1 \text{ true})$