STATS 3 SUMMARY

Z-SCORES

POPN	SAMPLE
$z = \frac{x-\mu}{\sigma}$	$z = \frac{x-\mu}{\sigma/\sqrt{n}}$

CENTRAL LIMIT THM

i) $\mu = \mu_{\bar{x}}$ ii) $\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$ iii) $n \geq 30$

$\Rightarrow$ Sampling Dist. is NORMAL

POPN. MEAN

$E = 1.96 \frac{\sigma}{\sqrt{n}}$ Pg 34 Tables

CI: $\bar{x} - E < \mu < \bar{x} + E$

Hypothesis Test

(1) $H_0: \mu = ?$ $H_1: \mu \neq ?$

Method 1:

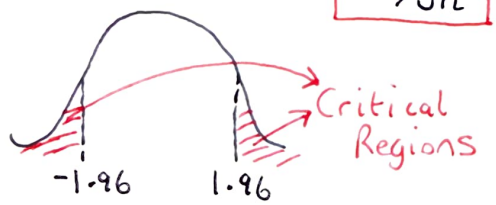
(2) 95% CI

(3) Conclusion

Method 2:

(2) Test Statistic $T = \frac{\bar{x}-\mu}{\sigma/\sqrt{n}}$ Pg 35 Tables

(3)

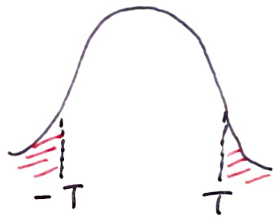


(4) Conclusion

Method 3:

(2) Test Statistic T

(3)



Use Tables Pg 36/37 to find the shaded areas = P-Value + Compare to 0.05

(4) Conclusion "p is low, H_0 has to go"

POPN. PROPORTION

$E = 1.96 \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$ Pg 34 Tables

CI: $\hat{p} - E < p < \hat{p} + E$

Hypothesis Test

(1) $H_0: p = ?$ $H_1: p \neq ?$

(2) 95% CI.

(3) Conclusion

For Sample Size calcs

$E \approx \frac{1}{\sqrt{n}}$