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Another 7.2 Problem

Survey 750 voters (as they leave the polling place) & learn that 360 voted for prop 30. Is this unusually low? (Assume that the population proportion was 0.50).

Answer with a z-score $\longrightarrow$ $z = \dfrac{\hat{p} - p}{\sqrt{\frac{pq}{n}}} = \dfrac{.48 - .50}{\sqrt{\frac{(.50)(.50)}{750}}} = \boxed{-1.10}$

$\hat{p} = \dfrac{x}{n} = \dfrac{360}{750} \approx 0.48$

$p = .50$, $q = 1 - p = .50$

$n = 750$

Not unusual

ANSWER with a p-value $\Rightarrow$ p-value $= P(\hat{p} \leq 0.48)$

$= P(z \leq -1.10) = .1357$

Not less than .05

Not Unusual

Check for appx. normality:

$np = 750(.50) = 375 \geq 10$ ✓

$nq = 750(.50) = 375 \geq 10$ ✓

Table A1

z	.00
-1.1	.1357