

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 $\rightarrow$ Z = $\frac{\hat{p} - p}{\sqrt{\frac{pq}{n}}} = \frac{.48 - .50}{\sqrt{\frac{(.50)(.50)}{750}}} = \boxed{-1.10}$
Z-score

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

$$p = .50, q = 1 - p = .50$$
$$n = 750$$

Not
unusual

ANSWER

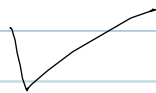
with a $\rightarrow$ p-value = $P(\hat{p} \leq 0.48)$

p-value

Check for
approx. normality:

$$np = 750(.50) = 375 \geq 10$$

$$nq = 750(.50) = 375 \geq 10$$



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

Table A1

Z	.00
-1.1	.1357

Not less
than .05

Not
unusual