

Assignment - 3

A car believes that percentage of citizens in city ABC that own a vehicle is 60% or less. A sales manager disagrees with this. He conducted a hypothesis testing surveying 250 residents & found that 170 residents responded yes to owning a vehicle.

- State the null & alternate hypothesis.
- at a 10% significance level, is there enough evidence to support the idea that vehicle owner in ABC city is 60% or less.

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$$\text{Reject } H_0 \text{ if } Z_0 \geq Z_\alpha$$

$$Z = \frac{\hat{p} - P_0}{\sqrt{\frac{P_0 Q_0}{n}}} = 2.58158$$

$$2.58158 \geq 1.29$$

we reject the null

hypothesis & conclude that the claim of sales manager is true, more than 60% of the citizens own a vehicle.

