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Assignment.

A car company believes that percentage of residents in a city ABC that owns a vehicle is 60%. A sales manager disagrees with this. He conducts a hypothesis testing surveying 250 residents and found that 170 responded yes to owning a vehicle.

(a) State null and alternate hypothesis.

(b) At 10% Significance value, is there enough to support the idea that vehicle ownership in city ABC is 60% or less?

⇒ $H_0 \longrightarrow \mu \leq 60\%$

$H_1 \longrightarrow \mu > 60\%$

$n = 250$

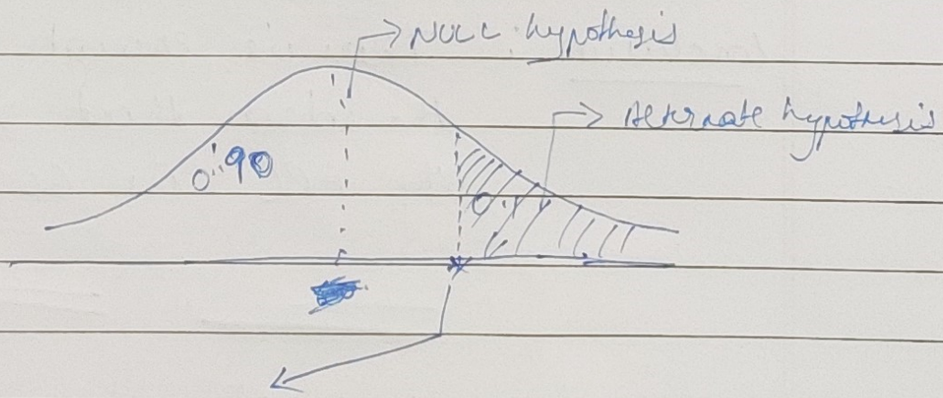
$P_0 = 60/100 = 0.6.$

$\hat{P} = 170/250 = 0.68$

This is a one tail Z-test with proportion.

Significance value, $\alpha = 10\% = 0.1$

Decision Boundary



$Z_{(1-0.1)} = Z_{(0.90)} = +1.29$