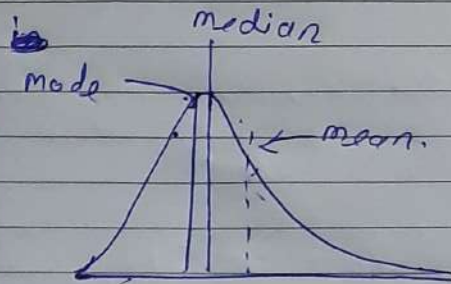


Chi square test claims about
population proportion
it is a non

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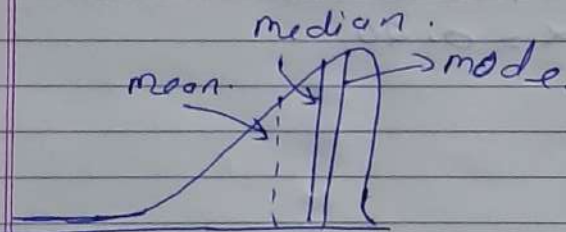
Ans in Right skewed

$\text{mean} > \text{median} > \text{mode}$



in Left skewed

$\text{mode} > \text{median} > \text{mean}$



Q24

2, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 9, 9, 10
11, 11, 11, 12

$$99^{\text{th}} \text{ Percentile} = \frac{99}{100} \times (20+1)$$

$$\frac{99}{100} \times 21$$

20.79th index

$\therefore 12$ is the answer.

$$\hat{p} = 0.68$$

$$p_0 = 60\%$$

$$q_0 = 40\%$$

$$\alpha = 0.10$$



$$z_{test} = \frac{0.68 - 0.60}{\sqrt{\frac{0.68 + 0.60}{2.50}}}$$

$$= \frac{0.08}{\sqrt{0.50}}$$

$$= \frac{0.08}{0.7071}$$

$$= 1.13$$

$$= 1.13$$

$$1.28 < 1.13$$

\therefore Do not reject the null hypothesis

0.12356 > 0.05

Q1. A car company believes that the percentage of residents in city ABC that owns a vehicle is 60%. A sales manager disagrees with this. He conducts a hypothesis testing surveying 250 residents & found 170 responded yes to owning a vehicle.

(a) State the null & Alternate Hypothesis.

(b) At 10% significance level is there enough evidence to support the idea that vehicle ownership in city ABC is 60% or less.

$\Rightarrow H_0 = P_0 \leq 60\%$ (Null Hypothesis)

$H_1 = P_0 > 60\%$ (Alternate Hypothesis)

$n = 250$

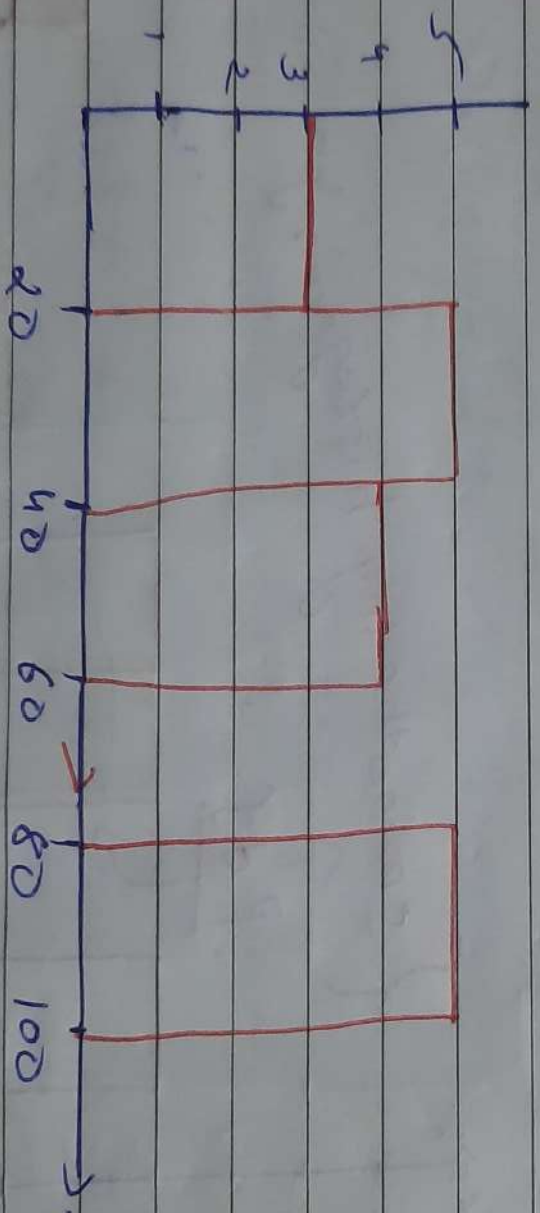
$x = 170$

$$\hat{p} = \frac{x}{n} = \frac{170}{250}$$

Assign
⇒

10, 13, 18, 22, 27, 32, 38, 40, 45, 51,
90, 92, 94, 99

Bins = 5 ; Bin size = 20



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