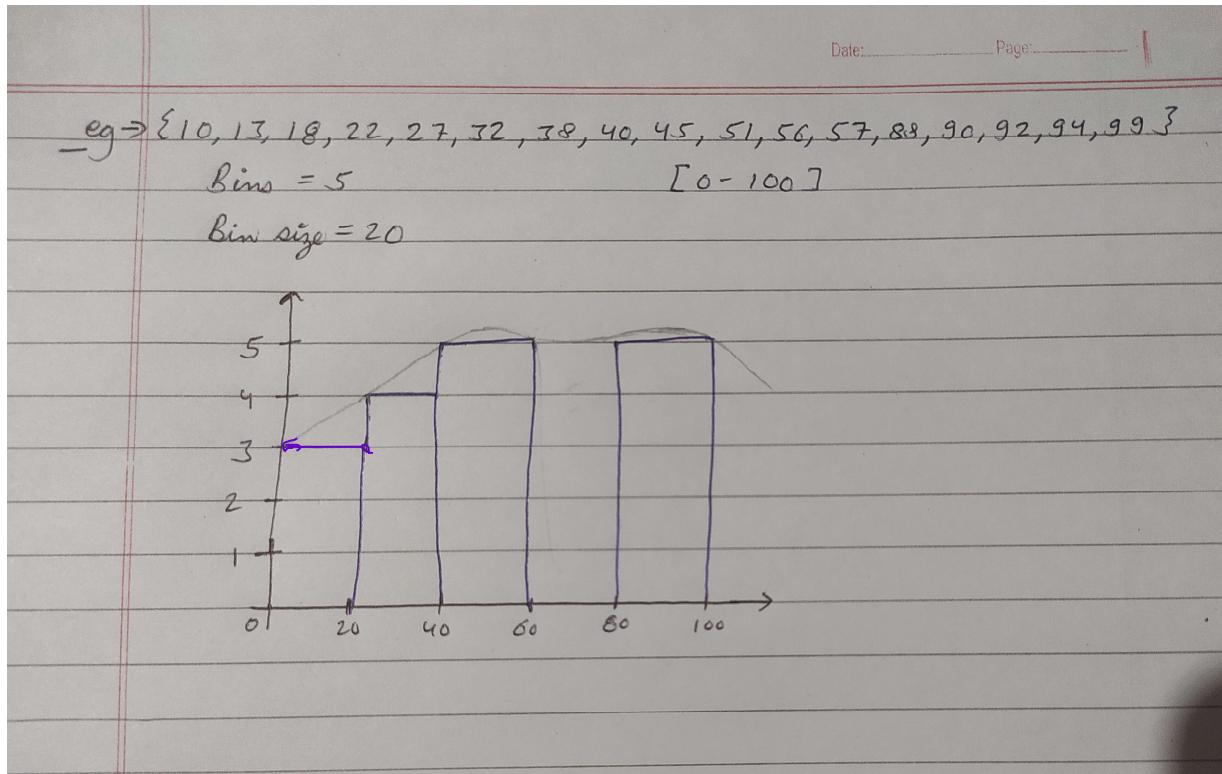
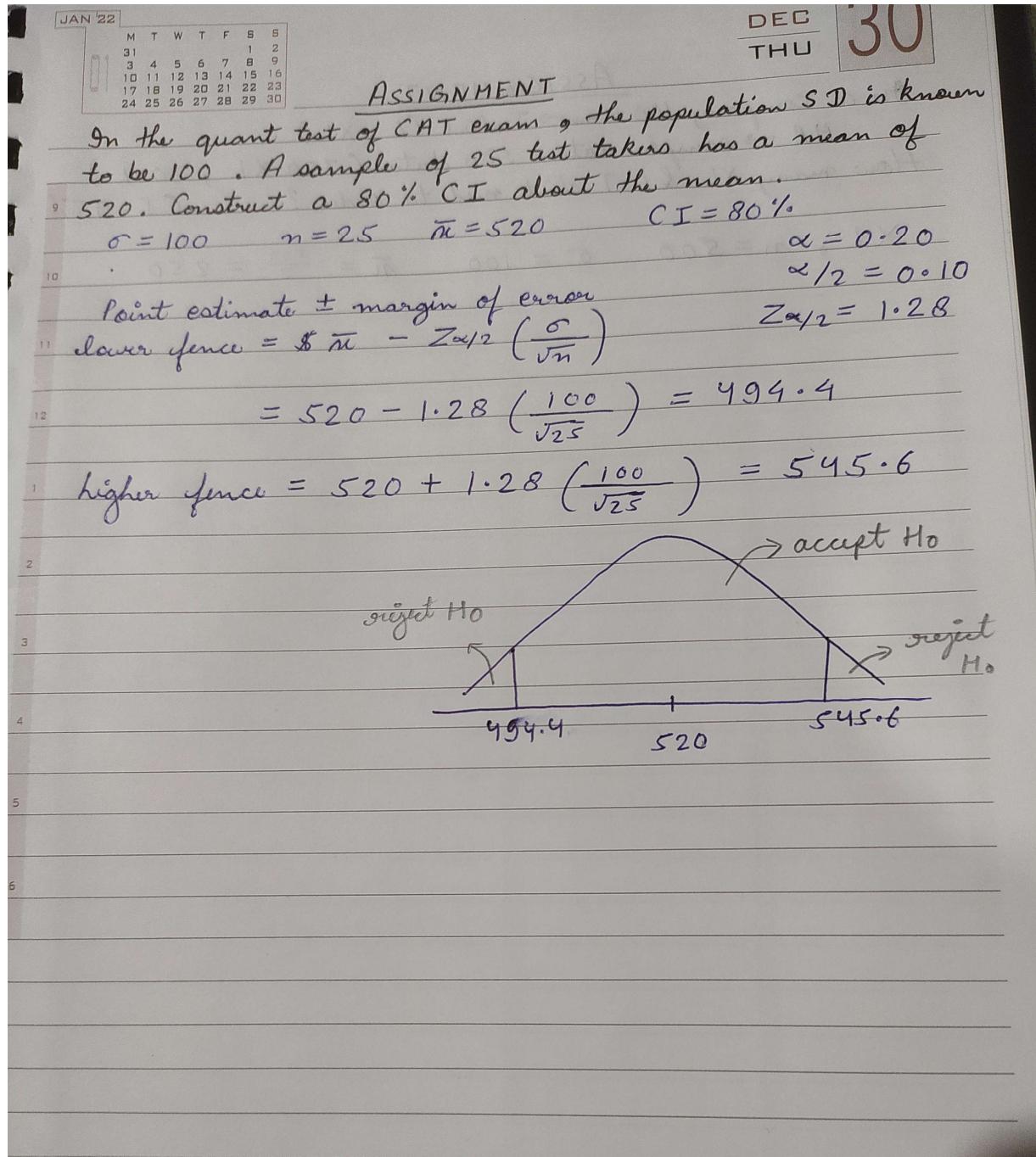


QUES-1:



QUES-2:



QUES-3:

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

$$(a) \text{ State } H_0 \text{ & } H_1$$

(b) $\alpha = 0.10$, is there enough evidence to support the idea that vehicle ownership in city is 60% or less.

$$H_0 : p_0 \leq 60 \quad (\text{1-Tail})$$

$$H_1 : p_0 > 60 \quad n = 250 \quad m = 170$$

$$q_{v_0} = 1 - p_0 \quad \hat{p} = m/n = 0.68$$

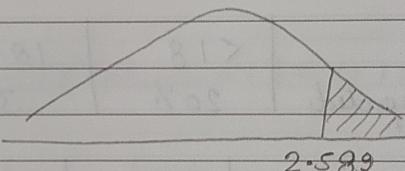
$$= 0.4$$

$$\alpha = 0.10$$

$$Z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0 q_0}{n}}}$$

$$Z\text{-score} > 1.29$$

$$= \frac{0.68 - 0.60}{\sqrt{\frac{0.4(0.6)}{250}}} \approx 2.580$$



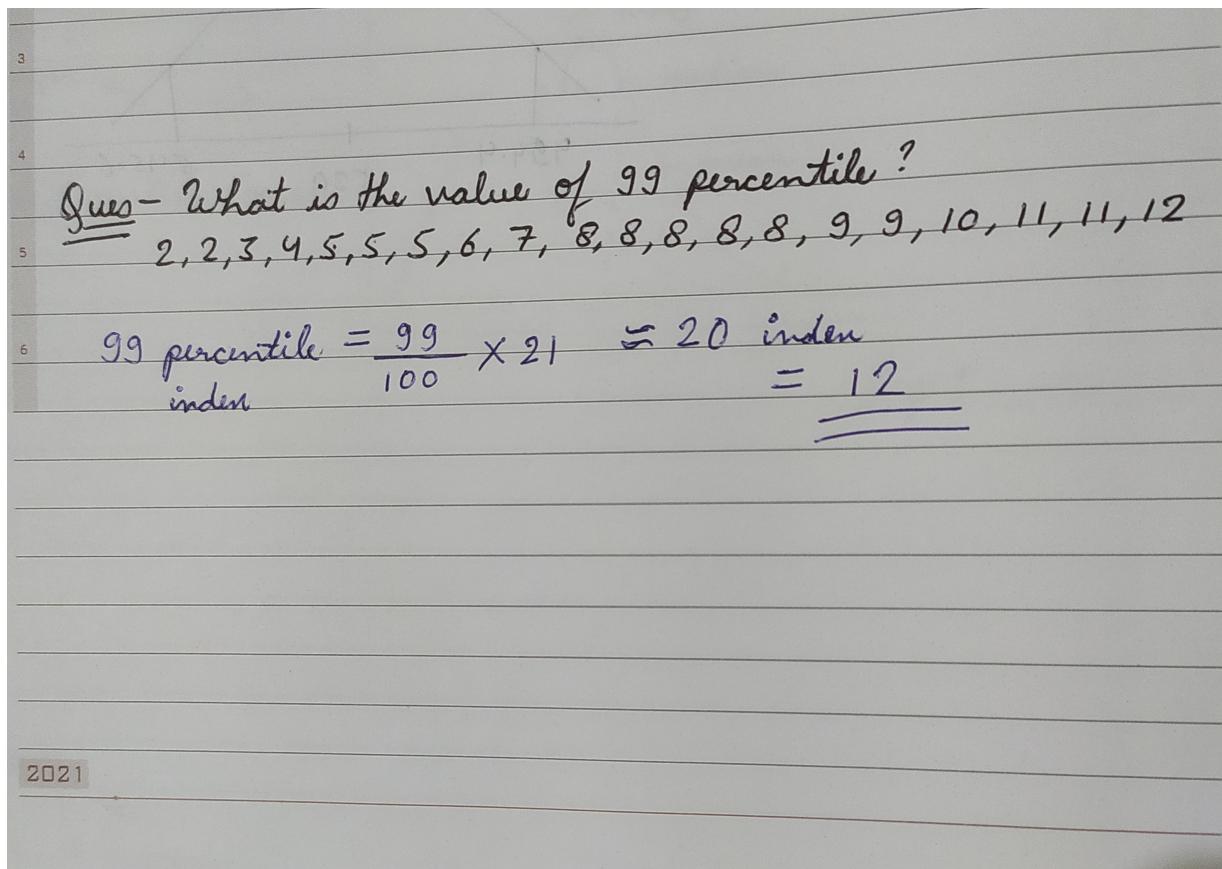
$$p\text{-Value} = \underline{0.00994} \quad 0.00994$$

$$p\text{-Value} > \alpha$$

Reject H_0 .

~~Reject H_0~~

QUES-4:



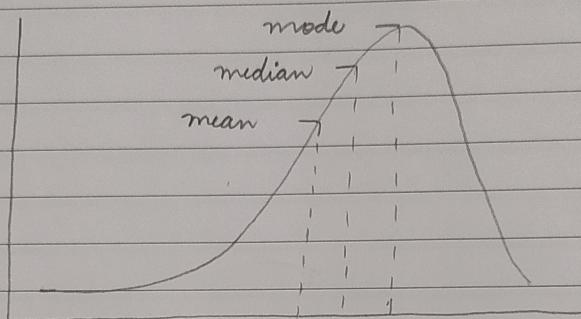
QUES-5:

Ques- In left & right - skewed data, what is the relationship b/w mean, median & mode?

9. Draw the graph to represent the same.

10. Left-skewed

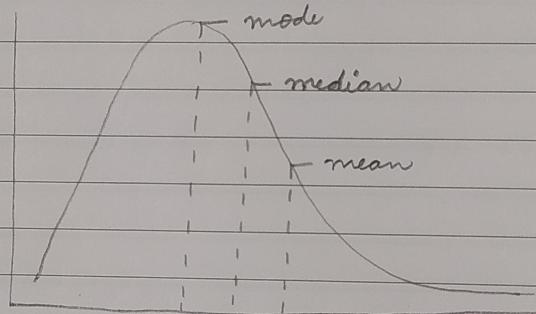
mean < median < mode



left-skewed

11. Right-skewed

mode < median < mean



Right-skewed