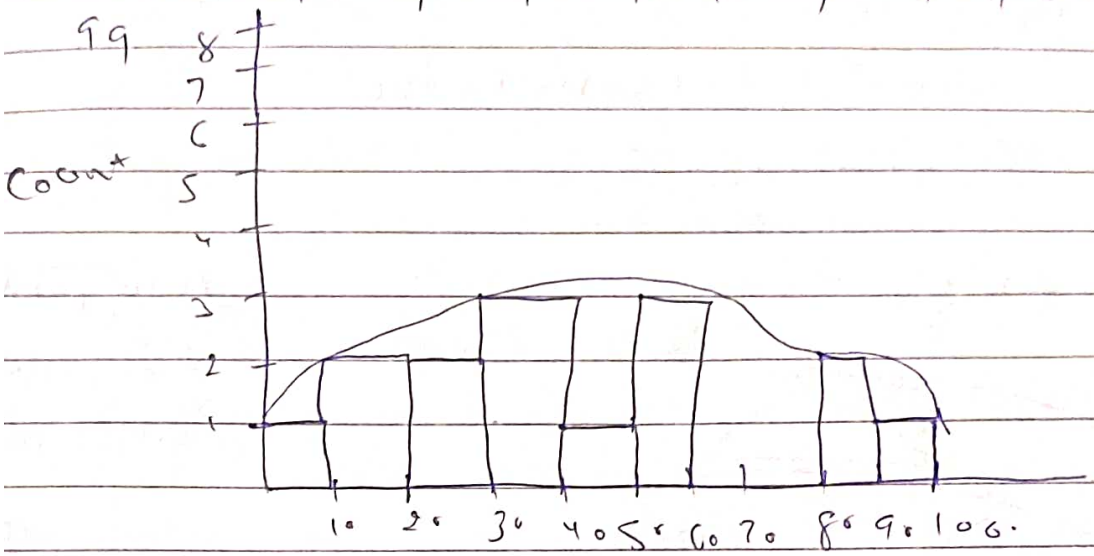
Q.1 Plot histogram

Date.....

10, 13, 18, 22, 27, 32, 35, 40, 45, 51, 55, 57, 88, 90, 92



bins = 10

Q-2 S.D - 100 σ

Mean - 520 ($\bar{X}$)

Sample - 25 test (N)

Construct an 80% CI(2).

α = 5%.

Sol

$$x = (\bar{X}) \pm 2\frac{\sigma}{\sqrt{N}}$$

$\bar{X}$ = Sample mean

σ = S.D.

2 = level

N = Sample size.

$$C.I = \bar{x} \pm Z_{\alpha/2}\frac{\sigma}{\sqrt{n}}$$

$$520 \pm 2\frac{5}{2}\frac{100}{\sqrt{n}}$$

$$520 - 0.8 \times \frac{100}{\sqrt{50}}$$

Spiral

Teacher's Sign.....

Q-3 Date.....

- 60% of Citizen vehicle own
- hypothesis testing 250 Resident
  170 Yes to own vechicle
  ~~level of significance~~

Ex 1

$n = 250$

$x = 170$

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

$z = \frac{\hat{p} - p}{\sqrt{pq}{n}}$

$\frac{170}{250} - .60$

$\sqrt{(.60)(.40)}$

- We have constructed a null hypothesis

Teacher's Sign .....

your alternative is statement of inequality
So alternative to ≤ 0.60 Date.....

-0.60

0.68 $\quad Q = 0.40$

Sample Size 250.

Standardized test statistic = 2.58

0.99506

- if left tail and Right tail always add up to one then the area in tail $P = 0.0494$

- Z scores is zero
  S.D. is one

Q-4 99 Percentile?

2, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 8, 9, 9, 10, 11, 11, 1

$N = 20$ $\quad \frac{P}{100}(n+1)$

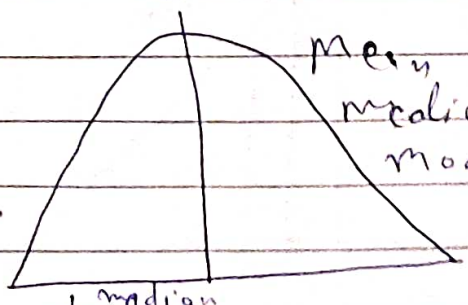
$\frac{99}{100}(20+1)$

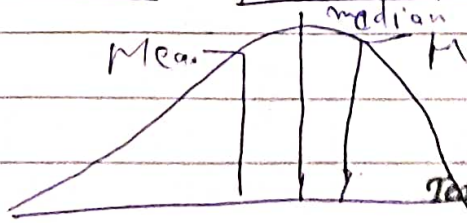
$\frac{99}{100} \times 21 = \frac{2079}{100} = 20.79$

Here it is saying that the 99% Percentile exists b/w 20th or 21th value.

Q=5

Positive skew





Spiral

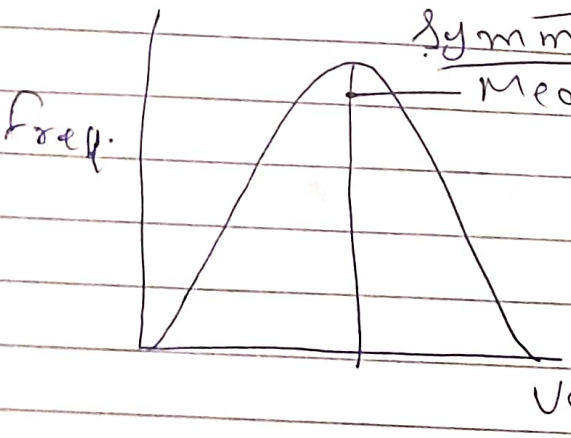
Teacher's Sign .....

Date.....

- Mean is the average of data set which is calculated by adding all the data values together and dividing it by the total Number of data sets
- Median is the middle value among the observed set of values and is calculated by arranging the values in ascending order or in descending order and then choosing the middle
- Mode is Number from a data set which has highest freq. and is calculated by counting the number

· Relationship

freq. Distribution with symmetrical freq Curve

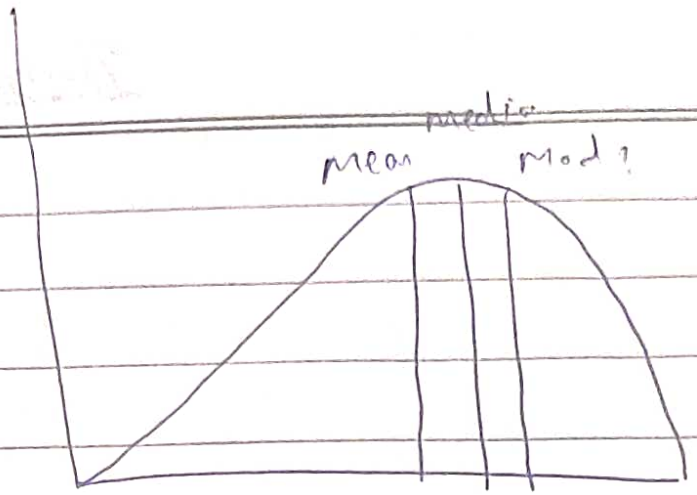


for positive skewed freq Distribution

mean > median > Mode

for Negative Skewed

Date.....



Mean < Median < Mod