① Assignment:

Eg: 10, 13, 18, 22, 27, 32, 38, 40, 45, 51, 56, 57, 88, 90, 92, 94, 99

bins size = 20,   # of bins is '5'
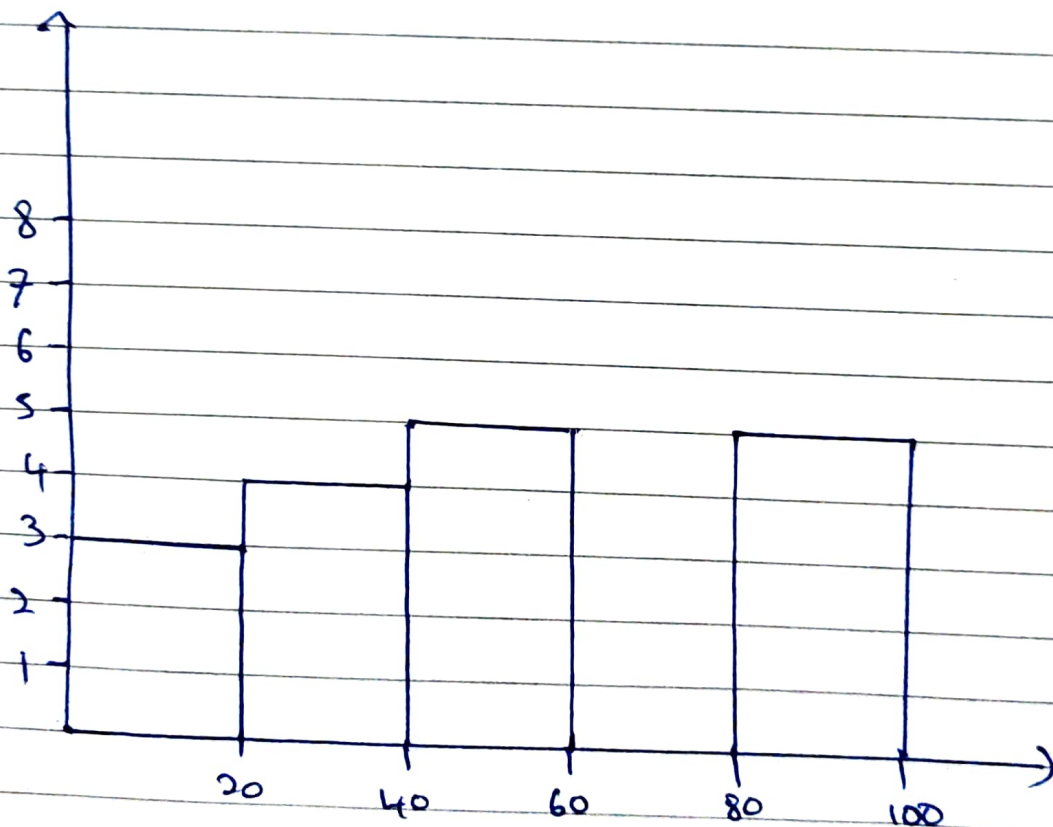
Stat - Assignment

② Quant chest of CAT exam
$\sigma = 100$
sample (n) = 25
$(\bar{x}) = 520$

construct an 80% CI about the mean.

Higher / Lower fence = Point estimate ± Margin of error.

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

α = significance value

$1 - C.I = \alpha$
$1 - 0.8 = 0.2$

$$= 520 \pm Z_{0.2/2} \times \frac{100}{\sqrt{25}}$$

$$= 520 \pm Z_{0.1} \times \frac{100}{5}$$

$$= 520 \pm \left(1.28 \times \frac{100}{5} \right)$$

$$= 520 \pm 25.6 \, 1$$

Lower fence = 494.4

Higher fence = 545.6

(4) Data set :

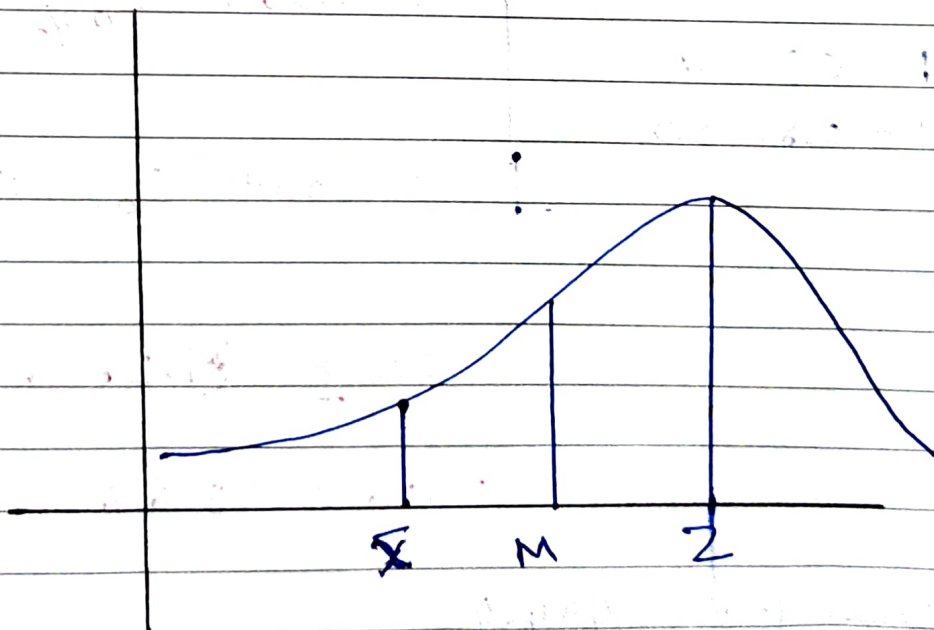2, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 8, 9, 9, 10, 11, 11, 12

$n = 20$ /,

99th percentile $= \dfrac{99 (n+1)}{100}$

$= 20.79^{th}$ index.

so, the 99th percentile is ⑫ /
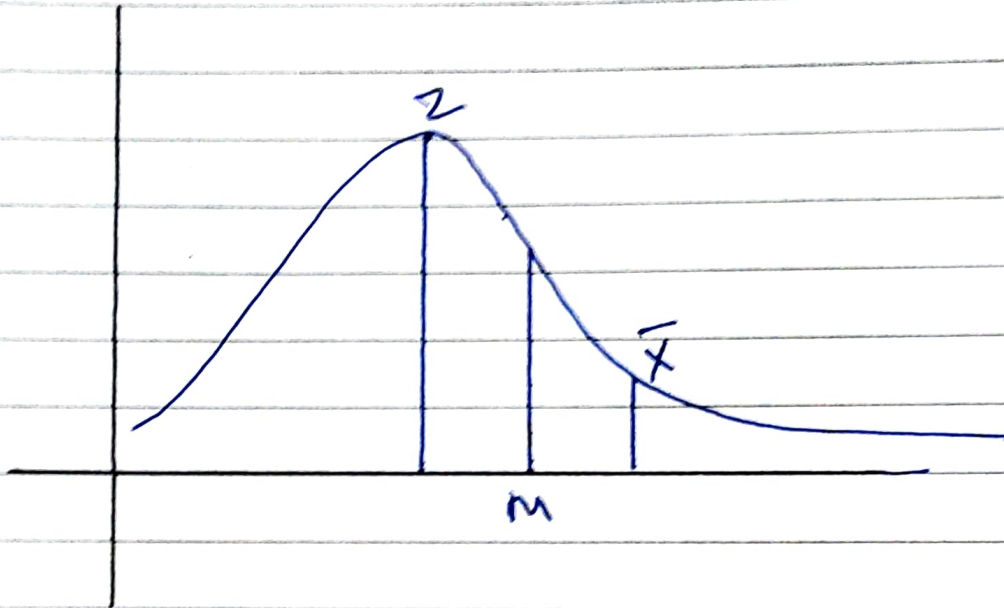
(5) Left skewed — negatively skewed.

As the distribution is left skewed, the mean will be the lowest, because the lesser numbers pulls the mean towards them so,

$\bar{x} < M < z.$

⑤ Right skewed distribution: — Positively skewed

As the distribution is positively skewed, the higher values present in the distribution tends to pull the mean value towards right, so,

$$Z < M < \bar{x}$$