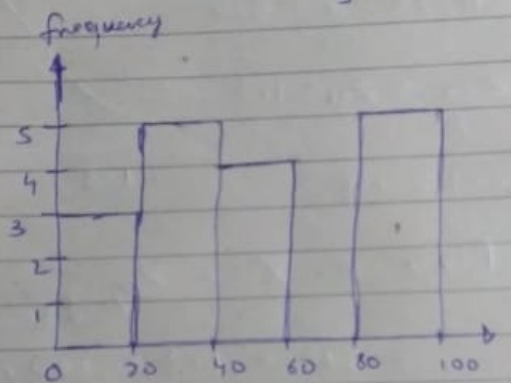
Assignment

Eg: 10, 13, 18, 22, 27, 32, 38, 40, 45, 51, 56, 57, 78, 88, 92, 94, 99

(0 - 100)

Bin = 5 Bin Size = $\frac{100}{5} = 20$

Histrogram



Assignment

Qu { 1, 2, 2, 2, 3, 3, 4, 5, 5, 5, 6, 6, 6, 6, 7, 8, 8, 9, 27 }

Find lower & higher fence, draw Box plot.

Ans $Q_1 = \frac{25}{100} \times 20 = 5^{th}$ Index = 3

$Q_3 = \frac{75}{100} \times 20 = 15^{th}$ Index = 7

$IQR = Q_3 - Q_1 = 7 - 3 = 4$

lower fence $= Q_1 - 1.5(IQR) = 3 - 1.5 \times 4 = -3$

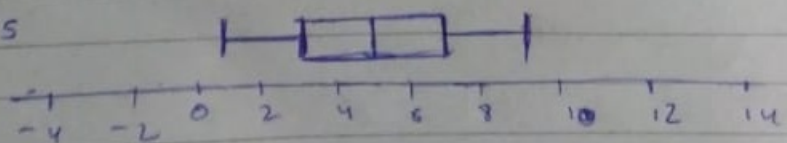
higher Fence $= Q_3 + 1.5(IQR) = 7 + 1.5 \times 4 = 13$

[-3 to 13]

Min = 1

Max = 9

Median = 5



Assignment

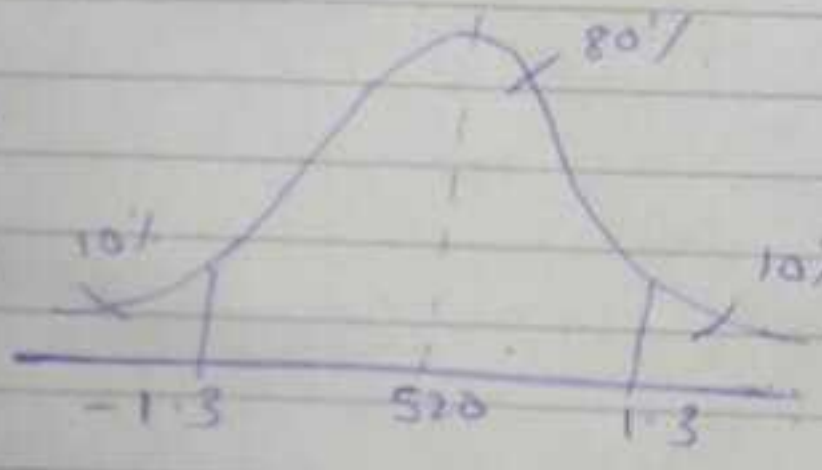
Qus In the quant test of CAT Exam, the population Standard deviation is known to be 100. A sample of 25 test taker has a mean of 520. Construct a 80% C.I about mean?

Ans

$\sigma = 100 \quad n = 25 \quad \bar{x} = 520$

$Z_{\alpha/2} = Z_{\frac{.20}{2}} = Z_{.1} = (1.3)$

$1 - .1 = .9$



lower Fence $= \bar{x} - Z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$

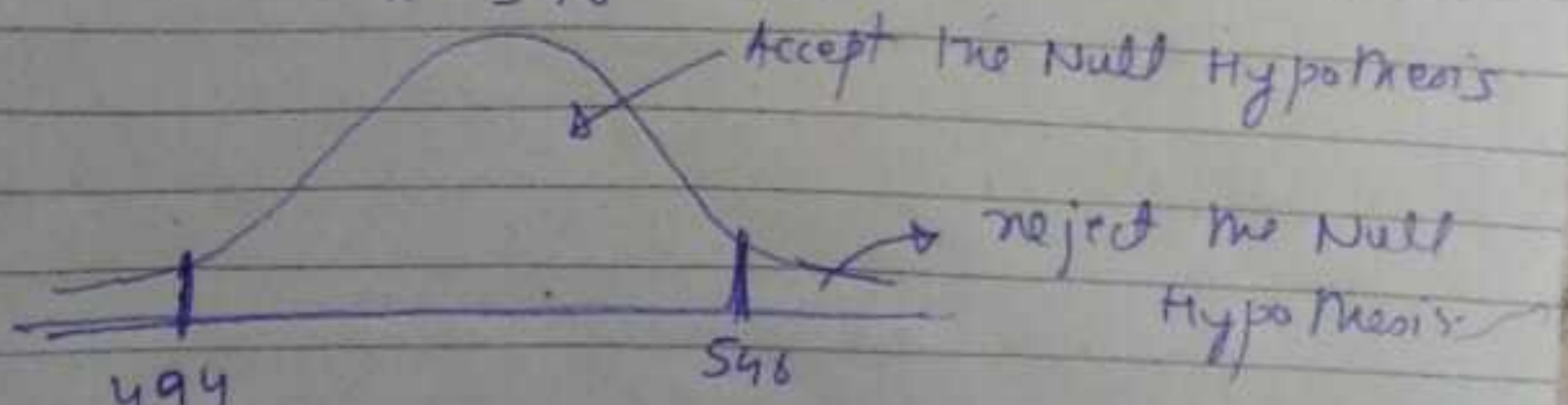
$= 520 - 1.3 \times \frac{100}{\sqrt{25}} 20$

$= 494$

Higher Fence $= \bar{x} + Z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$

$= 520 + 1.3 \times 20$

$= 546$



Ques3
Sol

$p_0 \geq 60$ $\quad n = 250$

$p_0 < 60$ $\quad \bar{x} = 170$

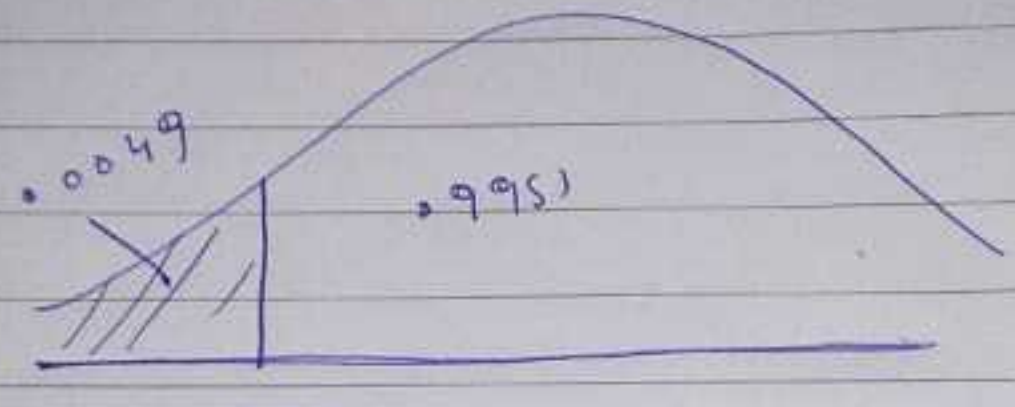
$\alpha = .1$

$p_0 = 60\%$ $\quad q_0 = 40\%$

$$\hat{p} = \frac{x}{n} = \frac{170}{250} = .68$$

$$z_0 = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0 q_0}{n}}} = \frac{.68 - .6}{\sqrt{\frac{.6 \times .4}{250}}} = \frac{.08}{.03098} = 2.581$$

$1 - .9951 = 0.0049$



$.0049 < .1$

Reject Null Hypothesis

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

Find the value of the 99 percentile.

$$\text{Value} = \frac{\%}{100}(n-1)$$

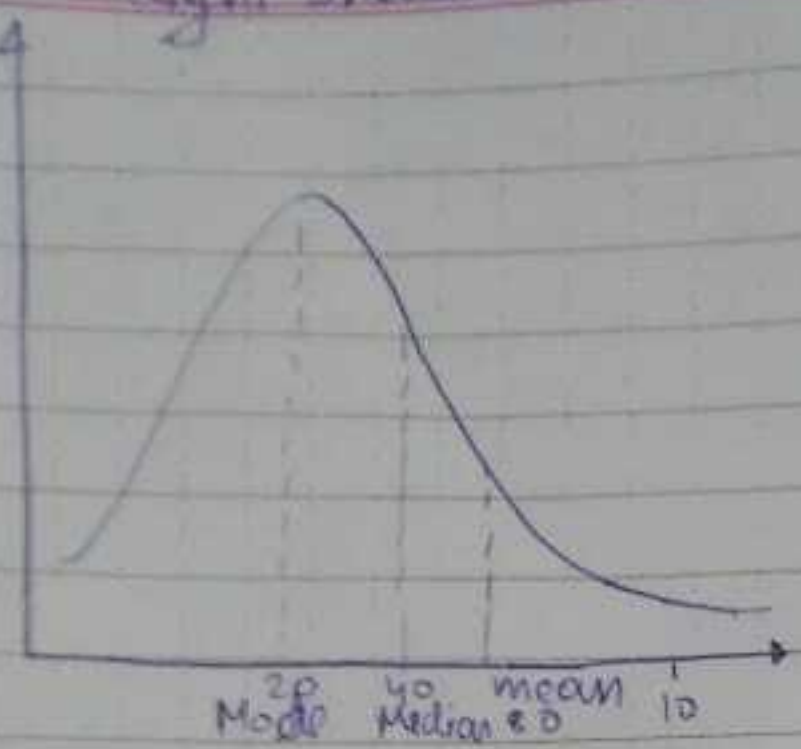
$$= \frac{99}{100} \times 19$$

18.81 Index $= \frac{11+11}{2} = \frac{22}{2} = 11$

11 will be your 99 %.

Page No.
Date
YOUVA

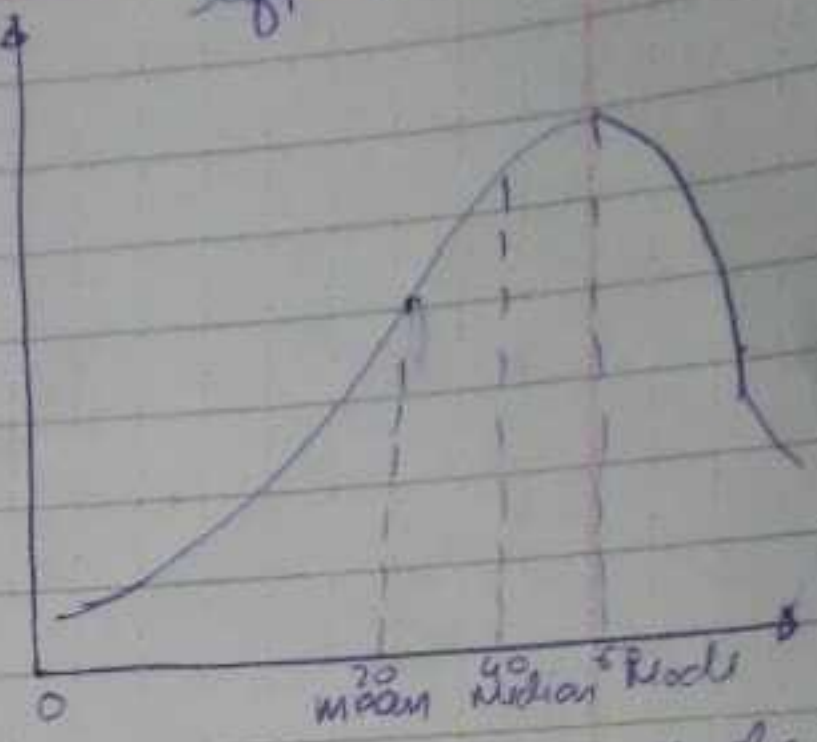
Right Skewness



mean > Median > Mode

Ex: Exam Score for topper

Left Skewness



Mean < Median < Mode

Ex: Exam Score for back bencher