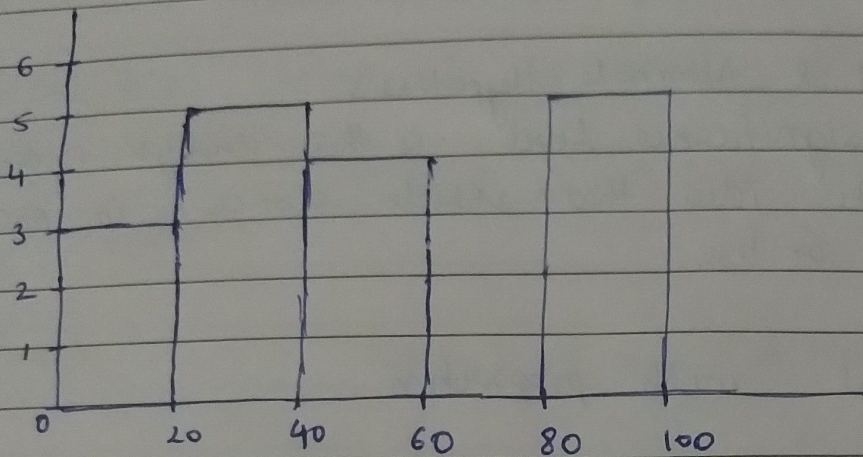Question 1 → Plot a histogram

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

estion- 2 → In a quant test of the CAT exam, the population standard deviation is known to be 100. A sample of 25 tests taken has a mean of 520. Construct an 80% CI about the mean.
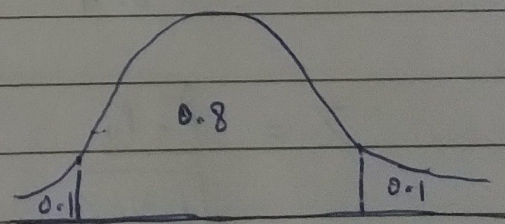
$\sigma = 100$ CI = 80%

$n = 25$ $\alpha = 0.20$

$\bar{x} = 520$

CI = Point estimate ± Margin of error

$= 520 \pm Z_{\frac{\alpha}{2}} \left(\frac{\sigma}{\sqrt{n}} \right)$

$= 520 \pm 1.285 \left(\frac{100}{5} \right)$

$= 520 \pm 1.285 \times 20$ ⇒ Upper fence = 545.7

lower fence = 494.3