ASSignement

$$C.I = 80\%$$

Ans) $\bar{x} = 520$

$n = 25$

$\sigma = 100$ (Population SD)

$C'I = 80\%$

$\alpha = 1 - 0.8$

$\alpha = 0.2$

$\alpha = 0.2$

$\frac{\alpha}{2} = 0.1$
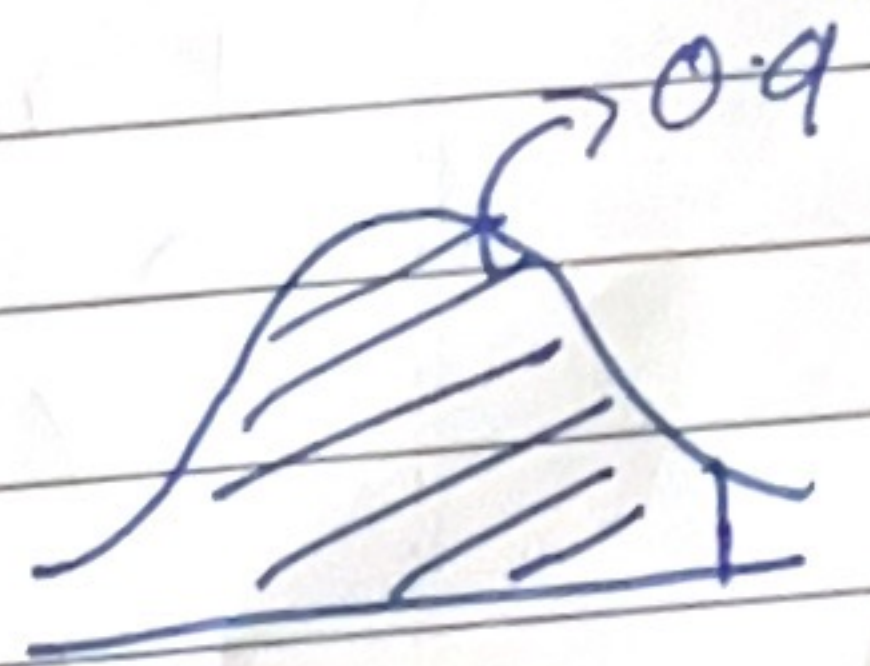
$\frac{\alpha}{2} = 0.1$

Lower fence $= \bar{x} - Z_{\frac{\alpha}{2}} \times \frac{\sigma}{\sqrt{n}}$

higher fence $= \bar{x} + Z_{\frac{\alpha}{2}} * \frac{\sigma}{\sqrt{n}}$

to get the point we need to find the remaining are

$1 - 0.1 = 0.9$

0.9 is the remaining area

0.9 falls between the point 1.28 and 1.24

$\frac{1.28 + 1.24}{2} = 1.285$

$\cancel{520}$

$$L \cdot F = 520 - 1.285 \times \frac{\frac{20}{100}}{5}$$

$$520 - 25.7$$
$$= 494.3$$

$$H \cdot F = 520 + 1.285 \times 20$$
$$545.7$$