Qun:

Construct a 80% C.I. about mean?

$\Rightarrow$

Assignment : 3 July

$$\sigma = 100 \qquad \bigg| \qquad \begin{array}{l} n = 25 \\ \bar{x} = 520 \end{array}$$
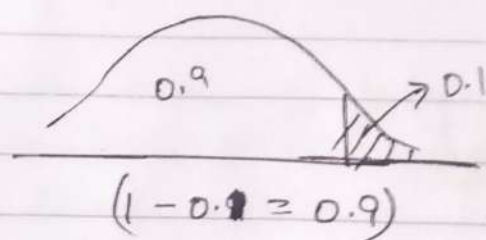
C.I = 80%

$\alpha = 1 - 80\% = 0.2$

$\Rightarrow$ $Z_{\alpha/2} = Z_{\frac{0.2}{2}} = Z_{0.1}$

$Z_{0.1} = 1.3$

$(1 - 0.1 = 0.9)$

$\Rightarrow$ $L.F = \bar{x} - Z_{\alpha/2}\left(\frac{\sigma}{\sqrt{n}}\right)$

$= 520 - 1.3\left(\frac{100}{\sqrt{25}}\right)$ $\Rightarrow$ $520 - \frac{1.3 \times 100^2}{10}$ $\frac{}{5}$ 1.282

$= 520 - 26 = \underline{494}$

$\Rightarrow$ $H.f = \bar{x} + Z_{\alpha/2}\left(\frac{\sigma}{\sqrt{n}}\right)$

$= 520 + 26 = \underline{546}$

Accept Null Hypothesis

Reject Null Hypothesis

494

546