

Q2. no. of samples $> 25 = n$

Sample mean $= \bar{x} = 520$

Population standard deviation $= 100$
(σ)

80% CI = ??

$$CI = \bar{x} \pm Z \cdot \frac{\sigma}{\sqrt{n}}$$

$Z = 1.281$ for 80% CI

$$\therefore CI = 520 \pm 1.281 \times \frac{100}{\sqrt{25}}$$

$$= \left(520 - 1.281 \times \frac{100}{\sqrt{25}} \right) + \left(520 + 1.281 \times \frac{100}{\sqrt{25}} \right)$$

$$= 494.4 \quad \& \quad 545.6$$

\therefore 80% CI

