# Assignment

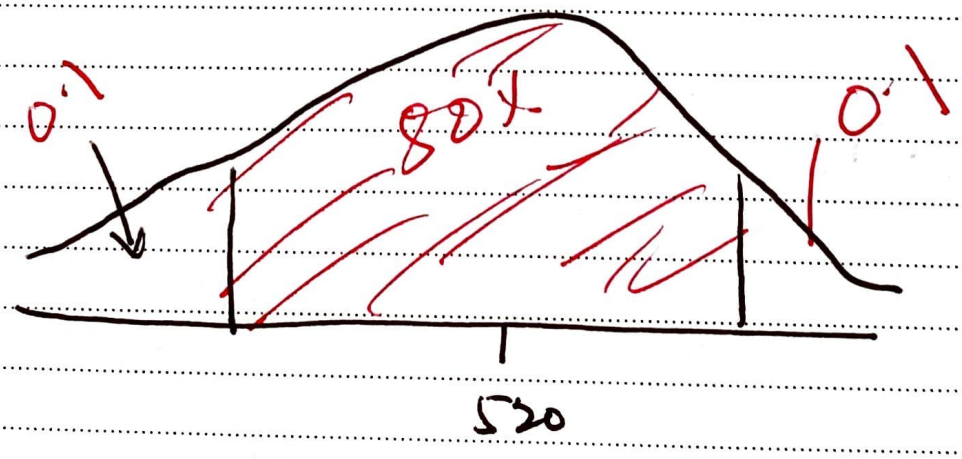
(*) In the recent test of CAT, the population Std deviation is known to be 100. A sample of 25 test takers had a mean of 520. Construct a 95% C.I. about mean?

80% ← Assign-ment

Ans:

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

C.I = 80%.




(*) Lower limit $= \bar{x} - z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$

(*) Higher limit $= \bar{x} + z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$

$\alpha = 1 - C.I = 1 - 0.8 = 0.2$

$Z = 1 - 0.2 = 0.8$

From Z-table

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

From Z table

$Z = 1 - 0.1 = 0.9$

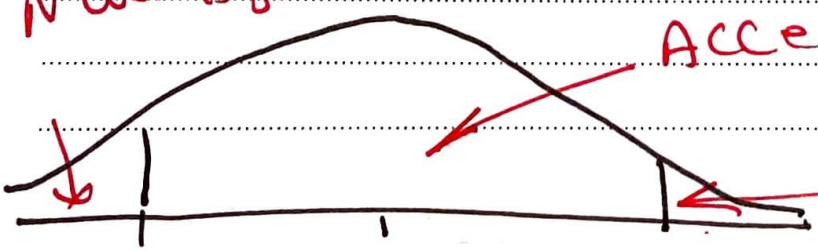
$Z = +1.29$

$-1.29$

$L.F = 520 - 1.29 * \frac{100}{\sqrt{25}} = 494.2$

$H.F = 520 + 1.29 * \frac{100}{\sqrt{25}} = 545.8$

Reject the Null hypothesis.



# Assignment

100 IC employed.

HR want to order T-shirts.

500 - data ⟹

300 - XL

200 - L

% of XL → $\frac{300}{500} = 0.6$

% of L → $\frac{200}{500} = 0.4$

⇓

XL - T shirts ⟹ 100,000 × 0.6

= 60,000 Nos.

L - T shirts ⟹ 100,00 × 0.4

= 40,000 Nos.