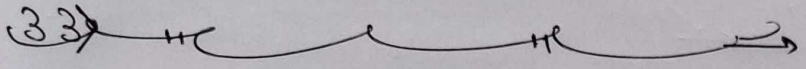
31) Normal distribution → Same qs solved in college exams.

32) " " → " type of " " " " " .

~~33) " " →~~



33) no of students $N = 500$

mean, $\mu = 65$; std dev $(\sigma) = 5$

~~(a) i. $P(x_0 > 70)$; $Z = \frac{x-\sigma}{\mu} = 70-65$~~

(a) $\therefore P(x > 70)$; $Z = \frac{x-\mu}{\sigma} = \frac{70-65}{5} = 1$

$\Rightarrow P(Z > 1) = 1 - P(Z < 1) = 1 - 0.8413$

$= 0.1587$ — Ans.

(b) $\therefore P(60 \leq x \leq 70)$; $Z_1 = \frac{x_1 - \mu}{\sigma} = \frac{60-65}{5} = -1$

; $Z_2 = \frac{x_2 - \mu}{\sigma} = \frac{70-65}{5} = 1$

$\Rightarrow P(-1 \leq Z \leq 1) = P(Z \leq 1) - P(Z \leq -1)$

$= 0.8413 - 0.1587 = 0.6826$

$\therefore$ No of students $= 500 \times 0.1587 = 79$

" " " $= 500 \times 0.6826 = 341$ } Ans.

34) Don't know about statistical hypothesis.

35)

36)

37)

38)