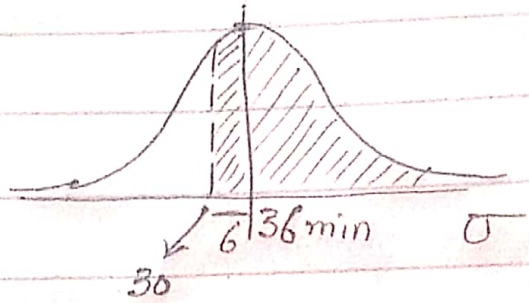
Assignment # 4

19L-1135 Section 4E

Probability and Statistics.

(a)



$P(x \geq 30)$

$P(30 < x < 36) + 0.5$

$= P(0 < x < (36+6)) + 0.5$

$= P(0 < x < 42) + 0.5$

$\mu = 36 \quad \sigma = 4.6$

$z = \frac{42-36}{4.6} = 1.30$

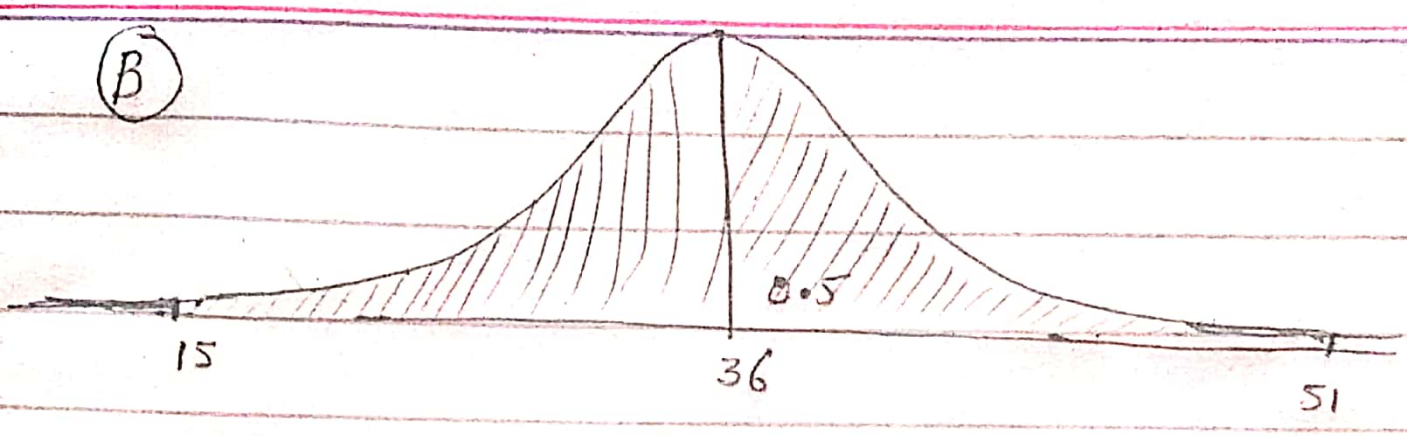
$P(0 < z < 1.3) + 0.5$

looking value of $z = 1.3$ in table

$= 0.4032 + 0.5$

$= 0.9032$ Ans.

(B)



$P(x < 15)$ reach on time

$P(x \geq 15)$ late (required)

$= 0.5 + P(0 < x < 36+15)$

$= 0.5 + P(0 < x < 51)$

$= 0.5 + P\left(0 < z < \frac{51-36}{4.6}\right)$

$= 0.5 + P(0 < z < 3.26)$

$= 0.5 + 0.5$ ↓ it does not exist in table but it is > 3.19 which means 0.5.

$P(\text{late}) = 1$ means (100%) Ans