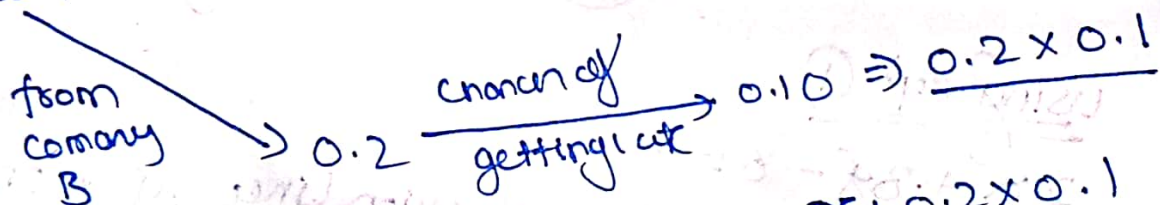
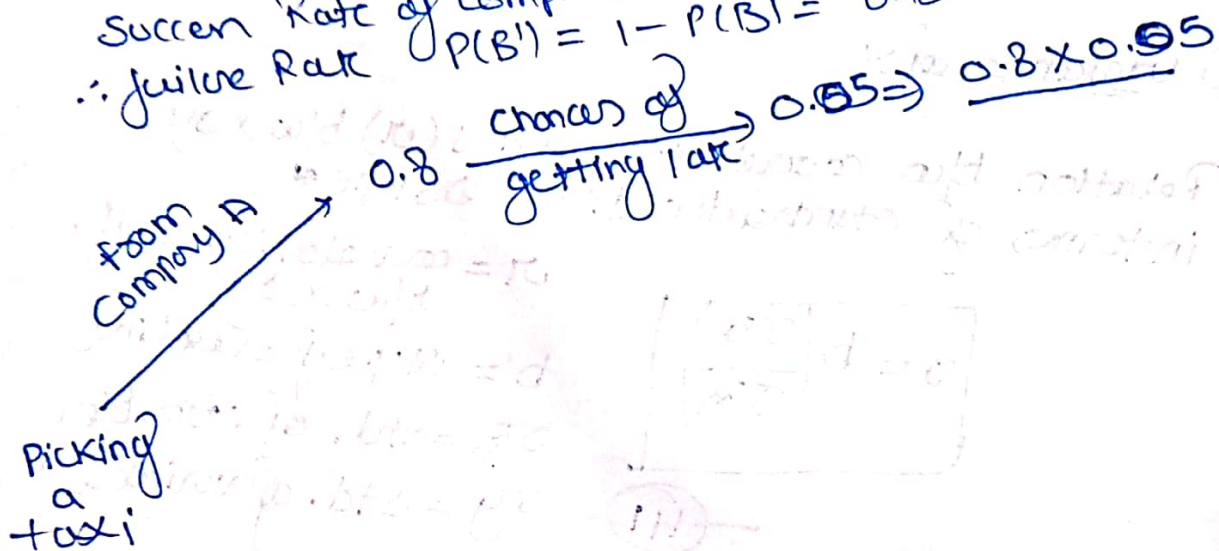


Q5

Total chance of picking taxi of company A = 80% = 0.8
Total chance of picking taxi of company B = 20% = 0.2

Success Rate of comp. A = 85% $\Rightarrow P(A) = 0.85$
 \therefore failure rate $P(A') = 1 - P(A) = 0.05$

Success Rate of comp. B = 90% $\Rightarrow P(B) = 0.90$
 \therefore failure rate $P(B') = 1 - P(B) = 0.10$



$$P(L) = \text{total prob of getting late} = 0.8 \times 0.05 + 0.2 \times 0.1$$

$$P(L) = 0.08$$

$$\text{Prob that late taxi is from company A} = \frac{0.8 \times 0.05}{(0.8 \times 0.05) + (0.2 \times 0.1)}$$

$$P(A|L) = 0.6666$$

66.67% chance that late taxi belongs to company A