

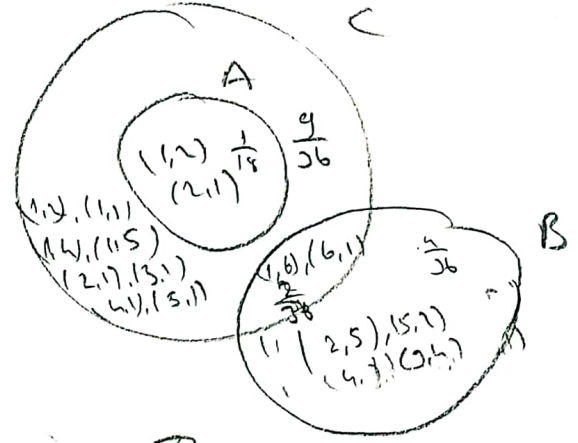
S1)

Q1)

$$P(A) = \frac{2}{36} = \frac{1}{18} \quad (1,2), (2,1)$$

$$P(B) = \frac{6}{36} = \frac{1}{6} \quad (1,6), (6,1), (2,5)$$

$$P(C) = \frac{11}{36} \quad (1,4), (1,2) \dots (2,1), (3,1) \dots$$



$$a) P(A|C) = \frac{P(A \cap C)}{P(C)} = \frac{1/18}{11/36} = \frac{2}{11}$$

$$b) P(B|C) = \frac{P(B \cap C)}{P(C)} = \frac{1/18}{11/36} = \frac{2}{11}$$

c)

→ A and B are dependent, A and C → Independent
→ B and C are dependent also

Q2) 20 students → 6 CSE, 14 Elec,

a → 3 kisi masagi set ediyon

b → 2 kisi bolil the work

c → 6 kisi scores

flakes sodece 1 is yorion

$$a) \binom{20}{3} \cdot \binom{17}{2} \cdot \binom{15}{6} \rightarrow \frac{20 \cdot 19 \cdot 18}{3 \cdot 2 \cdot 1} \cdot \frac{17 \cdot 16}{2 \cdot 1} \cdot \frac{15 \cdot 14 \cdot 13 \cdot 12 \cdot 11 \cdot 10}{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1} \Rightarrow \dots \text{Mesaplanir}$$

$$b) \binom{14}{10} \rightarrow 14 \text{ kisi den } 10 \text{ kisiye veriyon} \Rightarrow \frac{14!}{10! \cdot 4!} \Rightarrow \dots$$

$$\binom{20}{10} \rightarrow \text{Total combinations} \Rightarrow \frac{20!}{10! \cdot 10!}$$

$$c) \binom{14}{9} \cdot \binom{6}{1} \rightarrow \text{electronic Combination} \rightarrow \text{computer Combination}$$

$$\binom{20}{10} \rightarrow \text{Total (Sample space)}$$