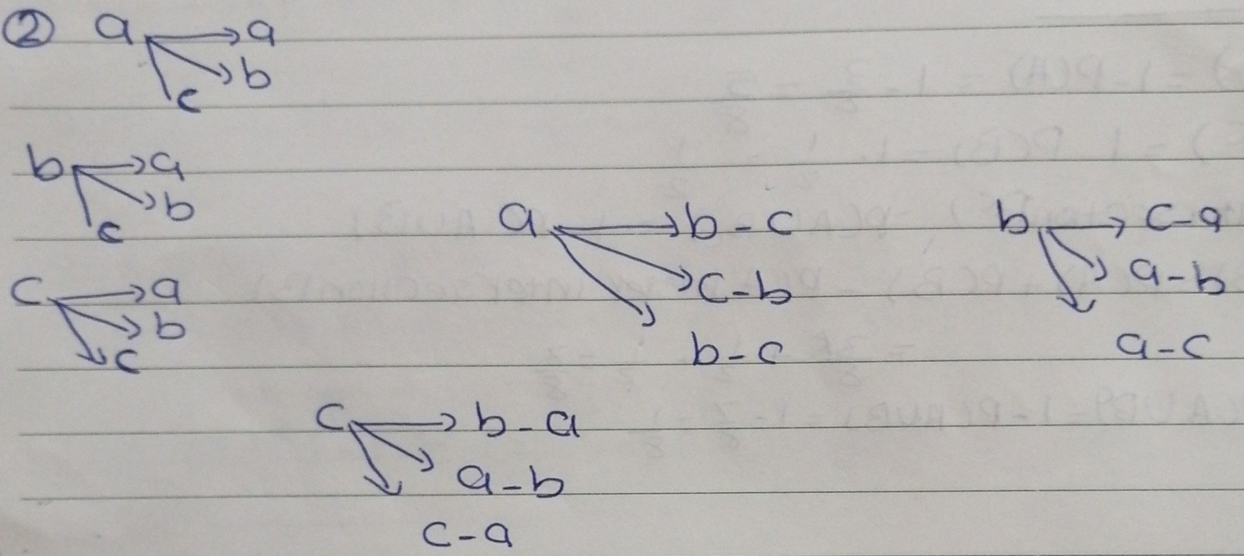
الموضوع: ريتا ابراهيم علي جودة (SW)

التاريخ: / /

① $12C4 = \frac{12!}{4!(12-4)!} = 495$

$(12C4) \times (8C4) \times (4C4) = 495 \times 70 \times 1 = 34,650$

②



③ $P(A) = \frac{4C_2}{12C_2} = \frac{1}{11}$

$P(B) = \frac{8C_2}{12C_2} = \frac{14}{33}$

$P(B') = 1 - \frac{14}{33} = \frac{19}{33}$

4) $S = C^{15}_3 = \frac{15!}{3!(15-3)!} = 455$

$P(\text{none defective}) = \frac{{}^{10}C_3}{455} = 0,2637$

$P(\text{one items is defective}) = \frac{{}^{5}C_1 \cdot {}^{10}C_2}{455} = 0,4945$

$P(\text{at least one defective}) = 1 - P(\text{none defective}) = 1 - 0,2637 = 0,7363$

5) 10 boys 20 girls

$10 + 20 = 30$ كل

$\frac{20}{30} = \frac{2}{3}$

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6) $P(A^c) = 1 - P(A) = 1 - \frac{3}{8} = \frac{5}{8}$

$P(B^c) = 1 - P(B) = 1 - \frac{1}{2} = \frac{1}{2}$

$P(A^c \text{ intersection } B^c) = P(A \cup B_c) = 1 - P(A \cup B)$

$P(A \cup B) = P(A) + P(B) - P(A \text{ intersection } B)$

$= \frac{3}{8} + \frac{1}{2} - \frac{1}{2} = \frac{7}{8}$

$P(A \cup B^c) = 1 - P(A \cup B) = 1 - \frac{7}{8} = \frac{1}{8}$

P

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7) $S = 6 \times 6 = 36 \Longrightarrow$ one roling

outcomes add to 7 :- $\longrightarrow (1,6), (2,5), (3,4), (4,3), (5,2), (6,1)$

6 P (roling a 7) $= \frac{6}{36}$ P(no roling a 7) $= 1 - \frac{6}{36} = \frac{30}{36} = \frac{5}{6}$

P(not roling a 7 all three) $= {}^{5}C_{6} \times {}^{5}C_{6} \times {}^{5}C_{6} = \frac{125}{216}$

P(at least roling a 7 all three) =

$1 - \frac{125}{216} = \frac{91}{216}$

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8) $\sum P(X) = 1 \Longrightarrow 1 = k^2 - 8$

$k = \pm 3 \longrightarrow k = 3$

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9) $P(A) = 0,35$ $P(B) = 0,45$

$P(\bar{A} \cap \bar{B})$

$P(A) + P(B) = P(A \cup B) = 0,45 + 0,35 = 0,8$

$P(\bar{A} \cap \bar{B}) = 1 - P(A \cup B)$

$1 - 0,8$ $= 0,2$