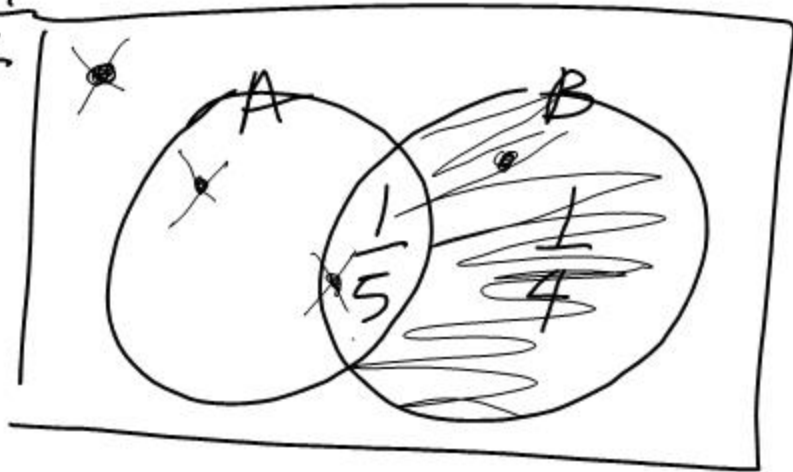


$$\begin{cases} P(A) = \frac{8}{15} \\ P(B) = \frac{9}{20} \\ P(A \cap B) = \frac{1}{5} \end{cases}$$

$$\begin{aligned} \textcircled{1} P(A \cup B) &= P(A) + P(B) - P(A \cap B) \\ &= \frac{8}{15} + \frac{9}{20} - \frac{1}{5} \\ &= \frac{32}{60} + \frac{27}{60} - \frac{12}{60} \\ &= \frac{47}{60} \end{aligned}$$

$$\textcircled{2} P(A' \cap B) = \frac{1}{4}$$

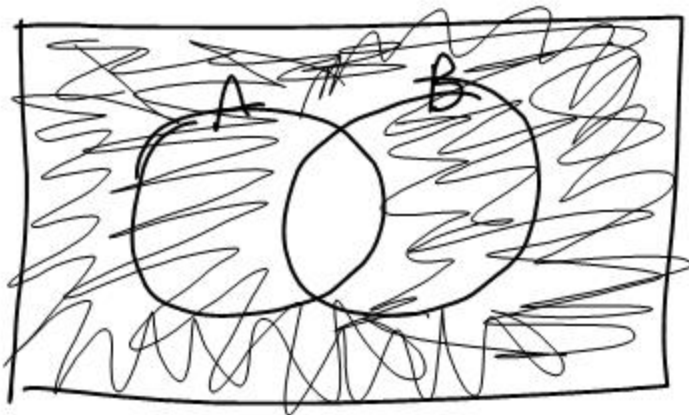
$$\frac{9}{20} - \frac{1}{5} = \frac{4}{20} = \frac{1}{5}$$



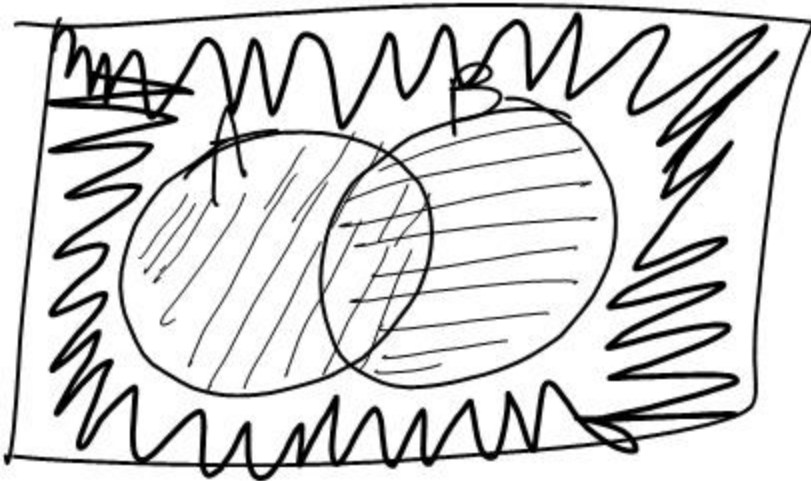
$$A' \cup B$$



$$* A' \cup B' = (A \cap B)'$$

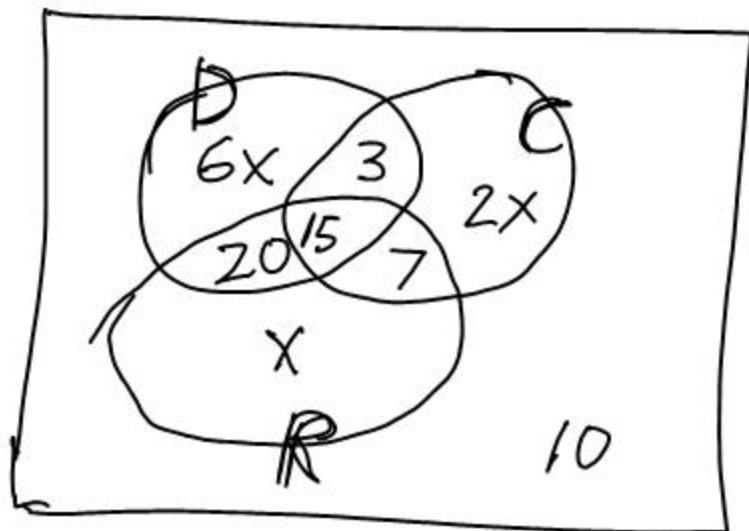


$$(A \cup B)' = A' \cap B'$$



# Review

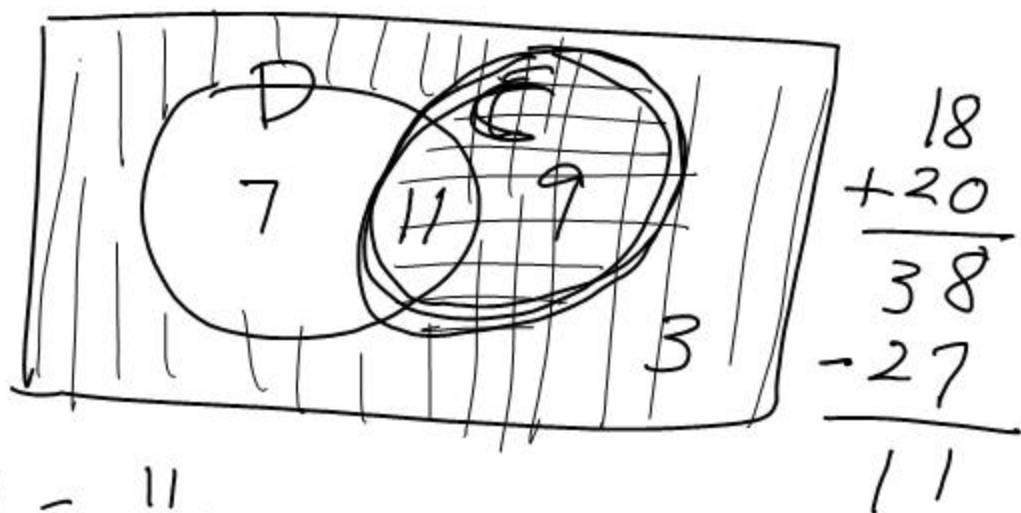
#5



$$6x + 2x + x + 3 + 15 + 20 + 7 + 10 = 100$$

$$x = 5$$

#2



$$\begin{array}{r} 18 \\ + 20 \\ \hline 38 \\ - 27 \\ \hline 11 \end{array}$$

$$\bullet P(D \cap C) = \frac{11}{30}$$

$$\bullet P(D | C) = \frac{P(D \cap C)}{P(C)} = \frac{11/30}{2/3} = \frac{11}{20}$$

$$\bullet P(D' \cap C) = 9/30$$

# HW Quiz 9/6

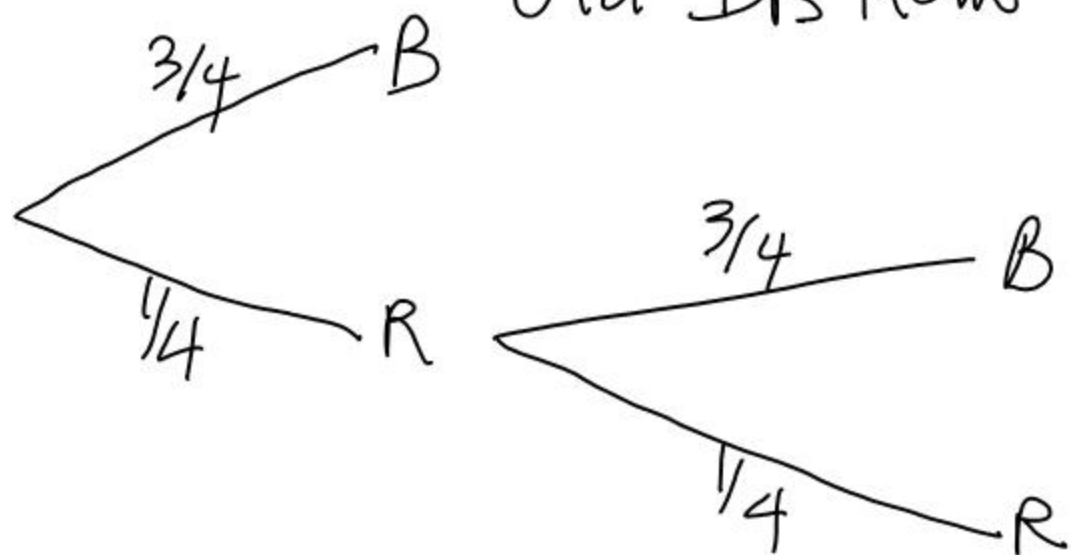
p. 94 #4  $\frac{1}{2}$

$$P(A) = 0.5$$

$$P(B) = 0.7$$

$$P(A|B) = \frac{3}{7}$$

old IB item



$$P(X=3) = \underline{P(R, B)} = \frac{1}{4} \cdot \frac{3}{4} = \frac{3}{16}$$

$$P(X=2) = P(B) + P(R, R) = \frac{3}{4} + \frac{1}{4} \cdot \frac{1}{4} = \frac{13}{16}$$