# Set for CP (MATHS)

1. $A - B = A - (A \cap B)$ → [Remove ele. of B from A]
2. $B - A = B - (A \cap B)$
3. $(A \cup B)^C = A^C \cap B^C$
4. $(A \cap B)^C = A^C \cup B^C$
5. $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$
6. $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$

★ 1. $n(A \cup B) = n(A) + n(B) - n(A \cap B)$

★ 2. $n(A \cup B \cup C) = n(A) + n(B) + n(C) - n(A \cap B) - n(B \cap C) - n(C \cap A) + n(A \cap B \cap C)$

★ 3. $A \cup B \cup C \cup D =$

$$n(A) + n(B) + n(C) + n(D) - n(A \cap B) - n(A \cap C) - n(A \cap D) - B \cap C - B \cap D - C \cap D + A \cap B \cap C + A \cap B \cap D + A \cap C \cap D + B \cap C \cap D - A \cap B \cap C \cap D$$

$$n(A) = \frac{num}{A}$$

$$n(A \cap B) = \frac{num}{LCM(A, B)}$$

$$n(A \cap B \cap C) = \frac{num}{LCM(A, B, C)}$$