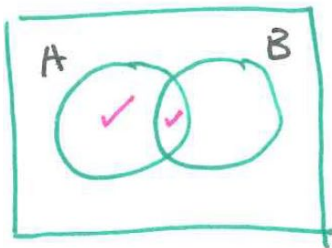
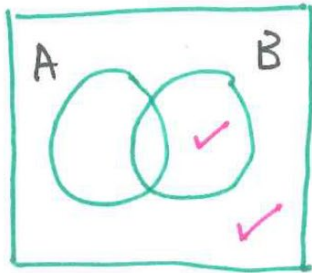


Year 1 Applied Chapter 5 - Probability

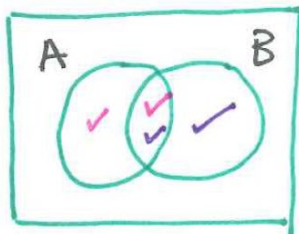
Venn Diagrams



$$P(A)$$

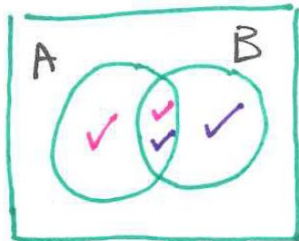


$$P(A')$$



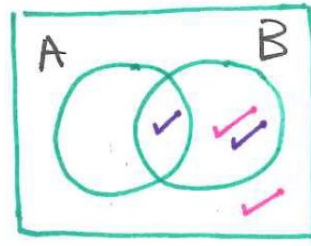
$$P(A \cap B)$$

and
double tick



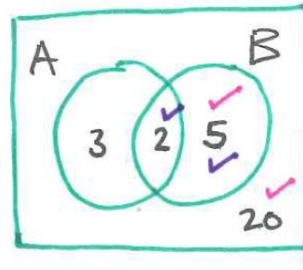
$$P(A \cup B)$$

or
anything ticked



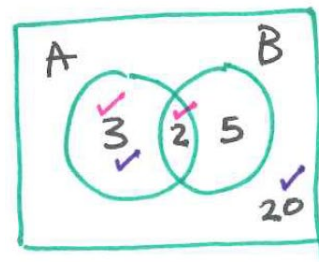
$$P(A' \cap B)$$

double tick



$$P(A' \cup B)$$

anything ticked
$$\frac{2+5+20}{30} = \frac{27}{30}$$

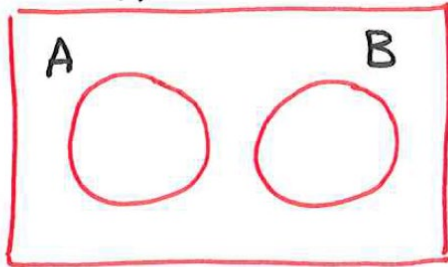


$$P(A \cap B')$$

double tick
$$\frac{3}{30}$$

Mutually Exclusive

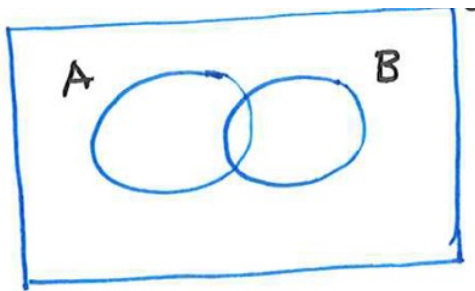
Cannot happen at the same time.



mutually exclusive if
 $P(A \text{ or } B) = P(A) + P(B)$

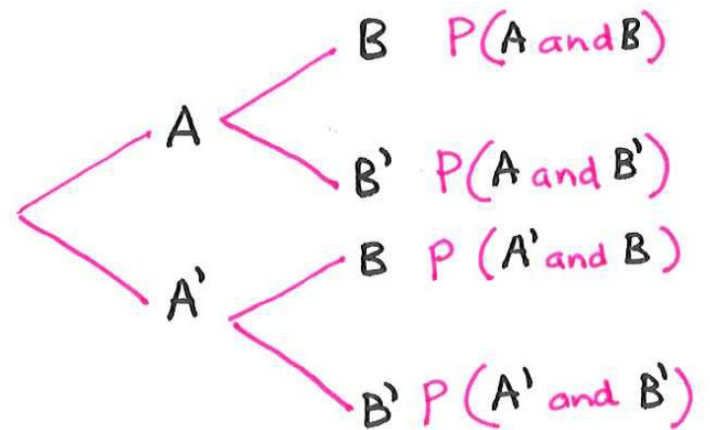
Independent Events

One event is not affected by another.



Independent if
 $P(A \text{ and } B) = P(A) \times P(B)$

Tree Diagrams



Always double check if the question is replacement or not replacement.
