

# VENN DIAGRAMS

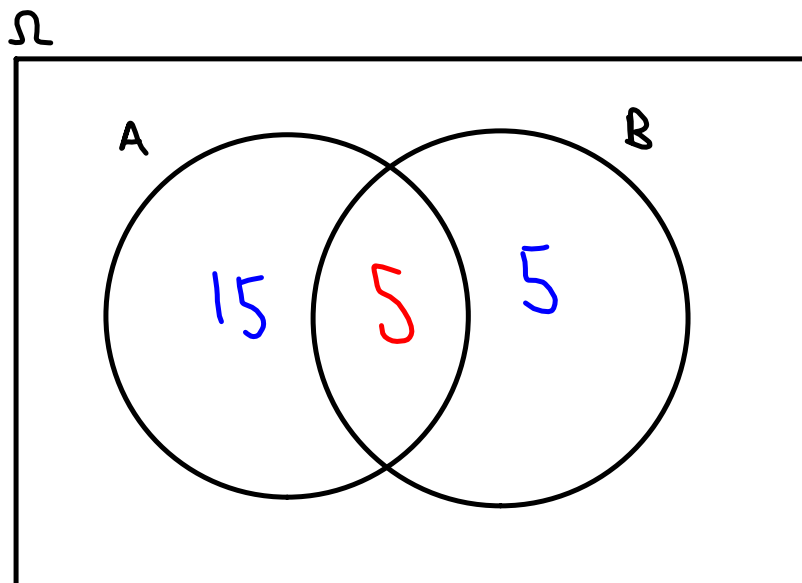
Goal:

- to become familiar with the union and intersection of events
- to understand the use of Venn Diagrams to represent probability experiments

In a class, 20 people speak English, 10 people speak French and 5 people speak both.

A: English

B: French



a)  $P(\text{english}) = \frac{20}{25} = \frac{4}{5}$

theoretical probability  
 $\frac{\text{favourable}}{\text{total}}$

b) Odds bilingual

5:20

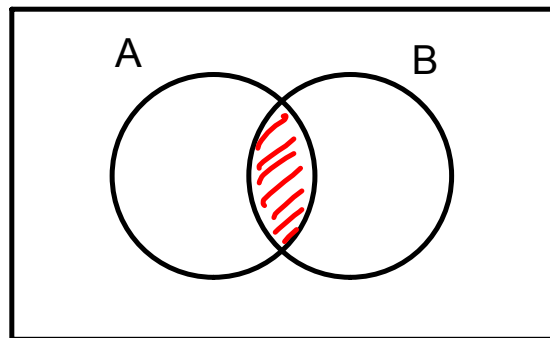
favourable: non-favourable

1:4

Intersection of A and B

$A \cap B$  : Eng. and Fr

$A \cap B$  : 5



Union of A and B

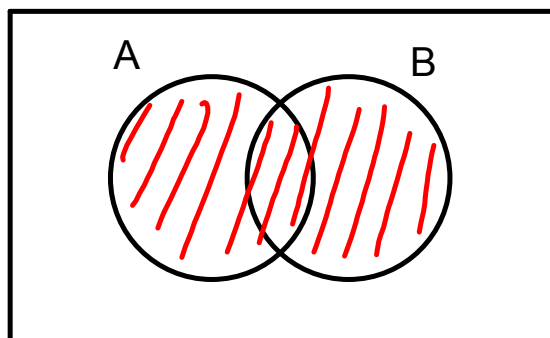
$A \cup B$  : Eng. or Fr



$A + B - A \cap B$

$= 20 + 10 - 5$

$= 25$



p. 384

1.  $\{1, 2, 3, 5, 7\}$

5.  $\{4, 6, 8\}$

