

Foundation unit 13

Probability

Key point 1

$$\text{probability} = \frac{\text{number of successful outcomes}}{\text{total number of possible outcomes}}$$

Key point 2

If the probability of an event happening is P , then the probability of it not happening is $1 - P$.

Key point 8

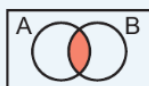
You can estimate the probability of an event from the results of an experiment or survey.

$$\text{estimated probability} = \frac{\text{frequency of event}}{\text{total frequency}}$$

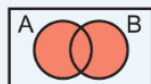
This estimated probability is also called the **experimental probability**.

Key point 11

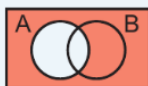
$A \cap B$ means A intersection B. This is all the elements that are in A and in B.



$A \cup B$ means A union B. This is all the elements that are in A or B or both.

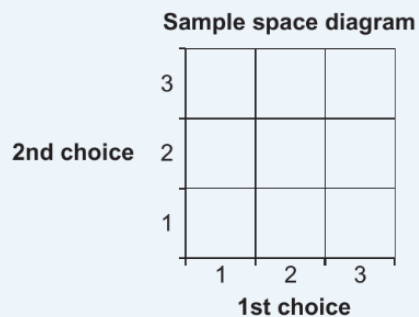


A' means the elements *not* in A.



Key point 15

When there are 3 ways of making the first choice and 3 ways of making the second, there are $3 \times 3 = 9$ ways of choosing two objects.



Alexander has seven coins in his pocket. There are three £1 coins and four €1 coins. He picks a coin from his pocket at random, keeps it out and then picks another coin at random.

- Draw a tree diagram to show this.
- Work out the probability that he picks two £1 coins.
- Work out the probability that he picks one of each type of coin.

