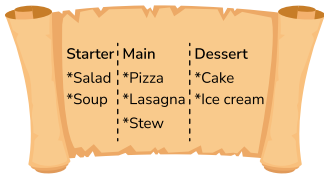


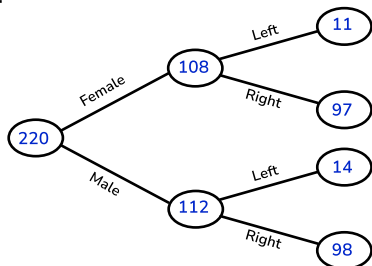
Combinations

How many different 3 course meals can be composed from these menu options?
= 12



Frequency trees

In a survey of 220 people, out of 108 females 97 were right-handed. There were 14 left-handed males. Use this information to complete the frequency tree.



Relative frequency

Nell tested a coin to see whether it was fair. Here are the results of the experiment:

Heads	Tails
32	28

What is the relative frequency of the coin landing on tails?
= $\frac{7}{15}$

Describing probability

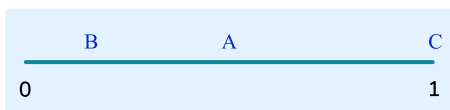
- Describe the probability of each event using words:
 - A square picked at random on a chess board will be white.
= **Even chance**
 - You will visit Mars this week.
= **Impossible**
 - The number when a dice is rolled will be greater than one.
= **Very likely**

- Mark each event on the probability scale.

A: $P(\text{heads on an unbiased coin})$

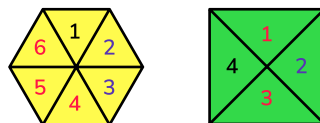
B: $P(6 \text{ on a fair dice})$

C: $P(\text{the sun will rise tomorrow})$



Calculating probability

The yellow and green spinners are used simultaneously.



- What is the probability of getting an even number on both spinners?
= $\frac{1}{4}$
- What is the probability of getting a purple number on both spinners?
= $\frac{1}{12}$

Sample space

Two 6-sided dice are rolled and their scores added together.

- Complete the sample space to represent this.
- When the two dice are rolled, what is the probability of scoring a total that is a multiple of three?
= $\frac{1}{3}$

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

Independent events

A bag contains 3 red chips, 2 blue chips and 4 green chips. A chip is drawn, its colour recorded and replaced, then a second chip is drawn.

- What is the probability of getting a red chip on both draws? = $\frac{1}{9}$
- What is the probability of getting a different colour chip on each draw? = $\frac{52}{81}$

Dependent events

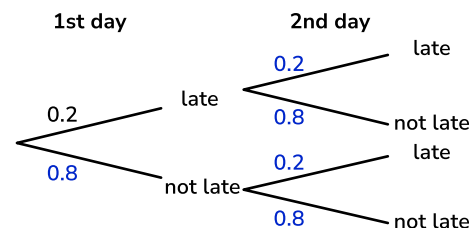
A bag of sweets contains 6 mints, 4 toffees and 10 chocolates. A sweet is taken and eaten, then a second sweet is taken.

- What is the probability of getting a toffee twice? = $\frac{3}{95}$
- What is the probability of getting a mint and a chocolate? = $\frac{6}{19}$

Probability trees

The probability that Pol is late for work is 0.2. Complete the probability tree and calculate,

- $P(\text{not late both days}) = 0.64$
- $P(\text{late only once}) = 0.32$



Venn diagrams

In a survey of 32 people, 20 people liked coffee. 7 people did not like coffee or tea.

- Fill in the missing values in the Venn diagram.
- Calculate the probability that someone likes coffee but not tea. = $\frac{1}{4}$

