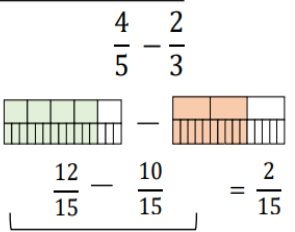


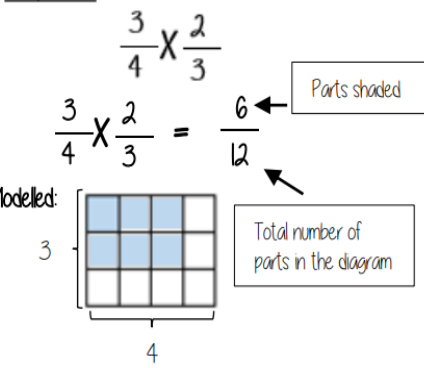
Add, Subtract and multiply fractions

Addition and Subtraction



Use equivalent fractions to find a common multiple for both denominators

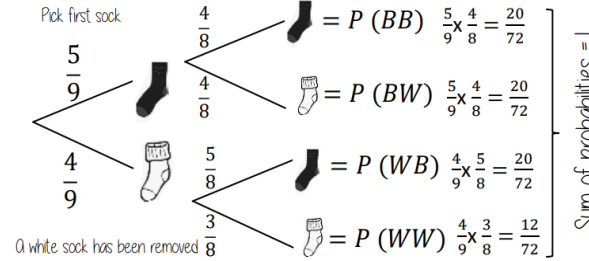
Multiplication



Dependent events

Tree diagram for dependent event

A sock drawer has 5 black and 4 white socks, Jamie picks 2 socks from the drawer.



Experimental data

Theoretical probability

What we expect to happen

Experimental probability

What actually happens when we try it out

The more trials that are completed the closer experimental probability and theoretical probability become

The probability becomes more accurate with more trials.

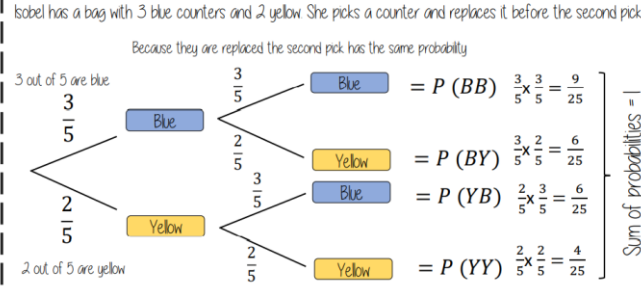
Theoretical probability is proportional

Independent events

The outcome of two events happening. The outcome of the first event has no bearing on the outcome of the other

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

Tree diagram for independent event



Relative Frequency

Frequency of event

Total number of outcomes

Remember to calculate or identify the overall number of outcomes!

Colour	Frequency	Relative Frequency
Green	6	0.3
Yellow	12	0.6
Blue	2	0.1
	20	

Relative frequency can be used to find expected outcomes

e.g. Use the relative probability to find the expected outcome for green if there are 100 selections

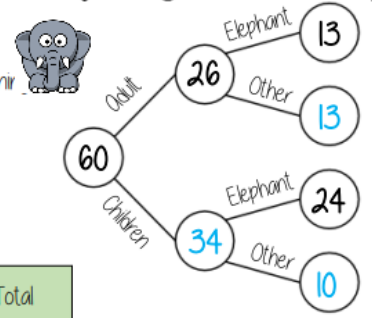
Relative frequency \times Number of times

$0.3 \times 100 = 30$

Tables, Venn diagrams, Frequency trees

Frequency trees

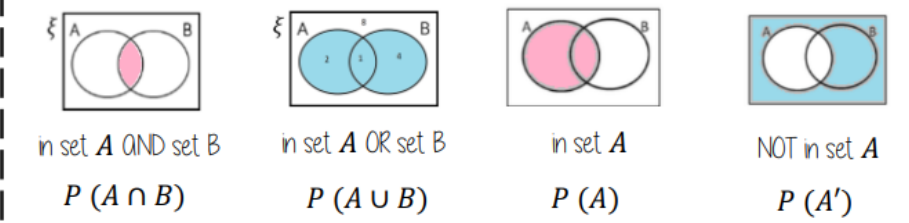
60 people visited the zoo one Saturday morning. 26 of them were adults. 13 of the adult's favourite animal was an elephant. 24 of the children's favourite animal was an elephant.



Two-way table

	Adult	Child	Total
Elephant	13	24	37
Other	13	10	23
Total	26	34	60

Venn diagram



Frequency trees and two-way tables can show the same information

The total columns on two-way tables show the possible denominators

$P(\text{adult}) = \frac{26}{60}$

$P(\text{Child with favourite animal as elephant}) = \frac{13}{37}$

