

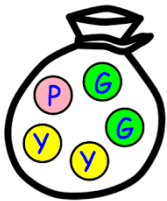
Maths Knowledge Organiser

Year 10 (F) Probability



Simple probability

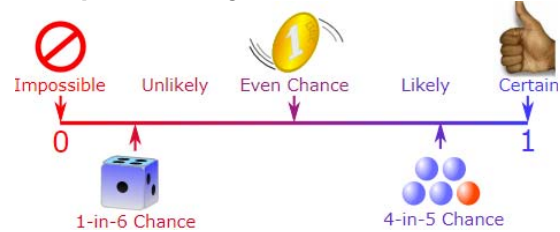
Probability is the likelihood of something happening in the future



Probability of picking green

$$\frac{\text{(how many)}}{\text{(total)}} \rightarrow \frac{2}{5}$$

The probability line



All probabilities add up to 1

Mutually exclusive events

Mutually Exclusive events means that 2 events can't happen at the same time.

Exhaustive events

For a single event, they are exhaustive only if all possible outcomes have been considered.

Two way tables

A table which includes 2 sets of data
 Each row and column have a total
 Use subtraction to find missing values in the table

	Left-handed	Right-handed	Total
Boys	17	18	35
Girls	12	23	35
Total	29	41	70

We can use them to calculate probability,

Probability picking a boy = $\frac{35}{70}$

Probability picking that's left handed = $\frac{17}{70}$

Sample space

Similar to two way table can be sued to calculate probability

Coin 1 \ Coin 2	H	T
H	HH	HT
T	TH	TT

Probabilities trees

Again another way to represent actual probabilities to work out combinations

Add the final probabilities if there is more than one way of satisfying the original question

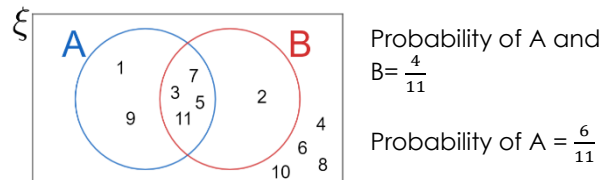
Relative frequency and successful outcomes

Relative frequency is essentially probability but often written as decimals.

Relative frequency multiplied by total number of trials predicts us how many successful outcomes there should be.

Venn diagrams

Similar to other methods is a way of representing data and calculating probabilities



Frequency trees

Again another way to represent data to work out probabilities. All branches total to their connect number

