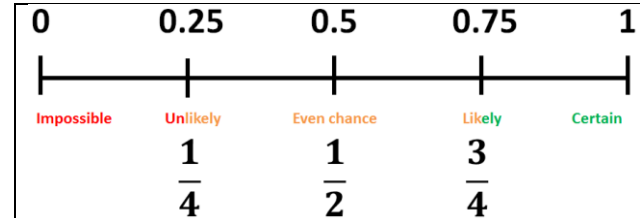


**Key Vocabulary**

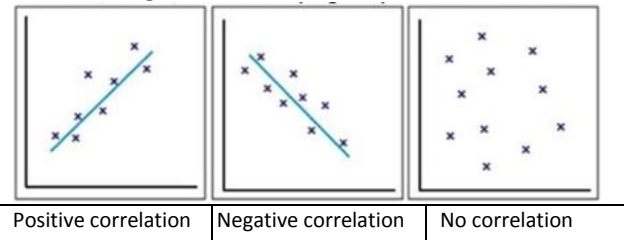
Probability	The chance that a particular outcome of an event will occur.
Theoretical probability	Ratio worked out on reasoning $\frac{\text{Number of wanted outcomes}}{\text{Total number of outcomes}}$
Event	A set of possible outcomes resulting from a particular experiment
Outcome	One of the possible results of a probability experiment
Equally likely	All events have the same chance of occurring
Mutually exclusive	Two events which cannot happen at the same time
Experiment	The name given to any controlled, repeatable process.
Continuous data	Measured data e.g time, money, weight, length
Discrete data	Counted data; number of pets, shoe size, car colours
Scatter graph	Graph of two sets of data plotted to look for relationships
Positive correlation	One amount increases as the other increases
Negative correlation	As one amount increases the other decreases

**Key facts / Diagrams**



- Probabilities always add up to one
- Probabilities can be written as a fraction, decimal or percentage




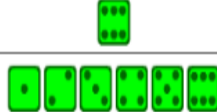

**Scatter Diagrams**



**Common misconceptions**

- Some pupils will initially think that, for example, the probability of it raining tomorrow is  $\frac{1}{2}$  as it either will or it won't.
- Some students may write a probability as odds (e.g. 1:6 or '1 to 6'). There is a difference between probability and odds, and therefore probabilities must only be written as fractions, decimals or percentages.

**Worked examples**

 • tossing heads	 heads (H) tails (T)	$\frac{1}{2}$
 • rolling a six		$\frac{1}{6}$
 • stopping on purple	$\frac{P}{P \ G \ B \ R \ Y}$	$\frac{1}{5}$