

# PROBABILITY

**Probability** is the area of mathematics concerned with the likelihood of particular random events.

Examples:

- when rolling a dice, the likelihood of getting a 2
- when throwing a coin, the likelihood of a tail
- the likelihood that a team wins the next game if they have won all previous games
- the likelihood of winning at lotto.

# PROBABILITY - DEFINITIONS

A **chance experiment** is an activity that may produce a variety of results that occur randomly.

Example: rolling a dice

When an experiment is performed one or more times, each occurrence is called a **trial**.

Example: when rolling a dice 50 times, each of the 50 rolls is a trial.

An **outcome** is the result of an experiment or game.

Example: when two coins are tossed, one possible outcome is head-tail

# PROBABILITY - DEFINITIONS

The **sample space** is the list of all possible outcomes. It is usually written between braces {}.

Example: when two coins are tossed, the sample space has 4 outcomes {Head & Head, Head & Tail, Tail & Head, Tail & Tail}

**Equally likely outcomes** are outcomes that have the same chance of occurring

Example: when two coins are tossed, one possible outcome is head-tail

# WORDS THAT DESCRIBE PROBABILITY

An **event** is a group of one or more outcomes.

Example: when two coins are tossed, the event of both coins being the same consists of 2 outcomes (Head & Head, Tail & Tail)

## Words that describe probability

