



Probability: Measuring the Chances of Events Happening

KS2 MATHS

DATA AND STATISTICS

Ages 10-13 ⌚ 3 min read

What is Probability?

Probability is a way of measuring how likely something is to happen. It tells us the chances of an event occurring—whether it's very likely, quite unlikely, or somewhere in between. We use probability every day without realising it: when we check the weather forecast, play games, or wonder if our team will win a match.

How Do We Measure Probability?

Mathematicians measure probability using numbers between **0 and 1**. If something has a probability of **0**, it will definitely not happen. If it has a probability of **1**, it will definitely happen. Everything else falls somewhere in the middle.

We can also write probability as a **fraction**, **decimal**, or **percentage**. For example, if you flip a fair coin, the probability of getting heads is $\frac{1}{2}$ (or **0.5**, or **50%**).

Think of it like a scale: imagine a line from 'impossible' on the left to 'certain' on the right. Probability shows us exactly where on that line something sits.

Simple Examples of Probability

When you roll a standard **six-sided dice**, there are six equally likely outcomes: **1, 2, 3, 4, 5, or 6**. The probability of rolling a specific number is $\frac{1}{6}$ (about **17%**). If you want to roll an even number, that's three chances out of six: $\frac{3}{6}$ or $\frac{1}{2}$ (**50%**).

Drawing a card from a standard deck has probability too. There are **52 cards** in a pack. The probability of drawing a heart is $\frac{13}{52}$ (or $\frac{1}{4}$, since there are four suits).

Think of it like a bag of coloured sweets. If there are 10 red sweets and 10 blue sweets, you have an equal chance of picking either colour—the probability is $\frac{50}{50}$.

Why is Probability Useful?

Probability helps us make informed decisions. Weather forecasters use it to predict rain. Scientists use it to test medicines. Insurance companies use it to work out

prices. Even video games use probability to decide when rare items appear!

Understanding probability teaches us that **just because something is unlikely doesn't mean it's impossible**—and just because something is likely doesn't mean it will definitely happen. This is an important lesson for real life.