

# 8 The probability scale – Part 1

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

## Vocabulary

*Write each word three times.*

**English**

**Write it 3 times** (English)

Probability

fraction

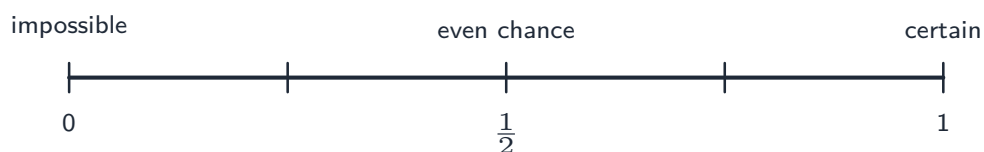
## Recall

**Probability** measures how likely something is. It is a number from 0 (impossible) to 1 (certain).

## New ideas

Read these first, then do the Practice.

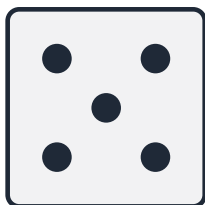
### ■ 1 The probability scale



A probability can be a **fraction**, a decimal or a percentage.

### ■ 2 Working out a probability

$$P(\text{event}) = \frac{\text{number of ways it can happen}}{\text{total number of outcomes}}$$



$$\begin{aligned} P(\text{rolling a 3}) \\ &= \frac{1}{6} \end{aligned}$$

**Watch out:** a probability is always between **0** (impossible) and **1** (certain) – never more than 1 or negative. Work it out as  $\frac{\text{ways it can happen}}{\text{total outcomes}}$ .

## Practice

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Try these in order.

**8.1** What is the probability of an *impossible* event? [1]

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**8.2** What is the probability of a *certain* event? [1]

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**8.3** A fair coin is flipped. What is the probability of Heads? [1]

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**8.4** A fair dice is rolled. What is the probability of getting a 5? [1]

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**8.5** A bag has 3 red and 2 blue balls. What is the probability of picking a red ball? [2]

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**8.6 Challenge.** A bag has 3 red, 2 blue and 5 green balls. Find the probability of picking (a) a green ball, (b) a ball that is *not* red. [3]