Percentage Calculations Example

A percentage is a ratio expressed per hundred: 18% means 18 parts out of 100. The term comes from the Latin per centum, and there is no single inventor of percentage arithmetic; it grew through commercial and financial calculation, while the familiar % symbol evolved over time. Converting a percent to a fraction over 100 makes the relationship precise: multiply the rate by the whole to find the corresponding part.

Example

Find 18% of 250.

$$\text{part} = (\text{percent} / 100) \times \text{whole}$$

Step-by-step solution

STEP 1

Convert the percent to a ratio

The percent sign means divide by 100.

$$18\% = 18 / 100 = 0.18$$

STEP 2

Multiply by the whole

A percentage of a quantity is the rate multiplied by that quantity.

$$0.18 \times 250 = 45$$

STEP 3

Use an easier split

Ten percent is 25 and eight percent is 20.

$$25 + 20 = 45$$

STEP 4

Check the size

Because 18% is less than 100%, the part must be less than 250.

$$45 < 250$$

ANSWER

18% of 250 is 45

10% of 250 is 25 and 8% is 20. Their sum, 45, confirms the result.

Use this worked example to review the method, then try a similar problem on your own.