Finding the Percentage of an Amount Using a Multiplier

Calculators Allowed

> **Prior Knowledge:**
> - Finding the percentage of an amount without a calculator
> - How to convert a percentage to a decimal

It is useful to remember that **percent** comes from the words **per-** (meaning out of) and **-cent** (meaning 100). A percentage is measured out of 100.

Percentage multipliers can be used to find the percentage of an amount.

Example
Find 8% of 40.

To find the **multiplier**, begin by writing 8% as a decimal.

$8 \div 100 = 0.08$

0.08 is the **multiplier**.

Then, multiply the given amount (40) by the multiplier (0.08):

$0.08 \times 40 = 3.2$

Your Turn

Section 1

Write down the multiplier for each percentage:

a. 42%

b. 37%

c. 65%

d. 90%

e. 75%

f. 84%

g. 25%

h. 70%

i. 20%

j. 5%

k. 1%

l. 12.5%

m. 14.2%

n. 27.9%

o. 102%

Section 2

For each question, find the percentage of the given amount using a multiplier. You must show your workings. You must also include the units in your answer.

a. 15% of 180

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b. 8% of 240ml

_____

_____

c. 11% of £5500

_____

_____

d. 18% of £40

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_____

e. 7% of 75kg

_____

_____

f. 29% of 18 litres

_____

_____

g. 4% of 80mm

_____

_____

h. 2.5% of £800

_____

_____

i. 12% of £148

_____

_____

j. 27.5% of 90 metres

_____

_____

k. 2% of 90 000 euros

_____

_____

l. 110% of 5 million

_____

_____

Section 3

a. Matthew saves 35% of the £12 pocket money he receives each week. How much money does he save per week?

_____

_____

_____

b. Leighton has a box containing 36 chocolates. He eats 25% of the chocolates. How many chocolates are left in the box?

_____

_____

_____

c. Nadia scored 65% in her Maths exam. The maximum score was 120. How many marks did Nadia score on the exam?

_____

_____

_____

d. A 400g tin of baked beans contains 5.5% protein. How many grams of protein are in the tin of baked beans?

_____

_____

_____

e. 850 students attend a secondary school. 62% of the students use the school bus to travel to school. How many students do not use the school bus?

_____

_____

_____

f. Which is larger, 20% of 12 or 15% of 18?

_____

_____

_____

Challenge

An adult ticket for the aquarium costs £15.70.

A child ticket is half the price of an adult ticket.

Two parents and their 3 children go to the aquarium.

They use a voucher for 15% off the total cost of the tickets.

How much money do they save? You should give your answer correct to the nearest penny.

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