

Fractions and percentages

Pearson Edexcel GCSE Mathematics 1MA1

Foundation and Higher • L010

Number and proportion • Review v0.9

The goal and the evidence

Connect & Check → Share → Present → Apply → Recall & Review

Use fractions and percentages to scale amounts.

Recover a whole and explain the reference amount.

Starting-point diagnostic

R1–R3 • Attempt without notes

$\frac{3}{5}$ as %; 15% as a decimal

$(\frac{2}{3}) \times (\frac{3}{4})$

$80 \div 5$; $80 \div 10$

A fraction as an operator

$$\frac{3}{5} \text{ of } 80 = 80 \div 5 \times 3 = 48$$

Your turn: $\frac{3}{4}$ of 28

Find one part, then the required parts.

A percentage of an amount

$$15\% \text{ of } £80 = £8 + £4 = £12$$

Your turn: 35% of £60

Use 30% + 5% or multiplier 0.35.

Operators above one

$$125\% \text{ of } 40 = 1.25 \times 40 = 50$$

Your turn: 150% of 24

Predict whether the answer increases.

Recovering the whole

$3/5$ of a whole = 24

One fifth = 8; whole = 40

Your turn: $2/3$ of a whole = 18.

NAME THE WHOLE BEFORE SCALING

35% of 80 means 0.35×80 .

To recover the whole, reverse the operator.

Diagnostic pause

Choose and explain before moving on.

15% of £60 = ?

A £9 B £15 C £900

Careful variation

A1 • Explain your decisions

Find 10%, 5%, 15% and 150% of 80. Explain which result exceeds 80.

Show your method and check the result.

Independent application

A2 • Without prompts

Find (a) $\frac{7}{8}$ of 64 (b) 12.5% of £48 (c) the whole when $\frac{3}{4}$ equals 27.

Show your method and check the result.

Use the method in context

A3 • Explain your decisions

A group has 30 learners. Two fifths walk to class. Of those walkers, 25% carry a bag. How many walkers carry a bag?

Show your method and check the result.

Intentional practice feedback

Read after attempting A3

3 learners.

Check the interpretation as well as the arithmetic.

A claim to test

C1 • Explain your decisions

Is 20% of 50 equal to 50% of 20? Explain why the equality holds.

Show your method and check the result.

Deepen the reasoning

C2 • Explain your decisions

A learner knows that $\frac{3}{5}$ of a number is 30 and multiplies 30 by $\frac{3}{5}$ again. Explain the error and recover the number.

Show your method and check the result.

Retrieval without notes

Q1–Q6 • Use full prompts in your workbook

Q1–Q3

$\frac{3}{4}$ of 32

15% of 60

125% of 24

Q4–Q6

$\frac{2}{5}$ of whole = 14

12.5% of 40

HCF(12,18)

Independent exit evidence

P1 • 2 marks • Without notes

Find 35% of £80, showing a method. [2]

Show working. Teacher review follows.

Independent exit evidence

P2 • 2 marks • Without notes

Three quarters of a quantity is 18 kg. Find the whole and check. [2]

Show working. Teacher review follows.

Feedback and next steps

P3 • Completion is not mastery

Name one decision you can now explain.

Choose a fresh question and a delayed check.

Before the next lesson

L011: Percentage change and reverse percentages

Complete F1 tomorrow without notes.

Read and attempt F2; bring one question.

Optional stretch

Find 35% of £240 using 10%, 5% and a combination.

Show a method. Explain a check or counterexample.

Optional deep challenge

A class has 18 of 24 learners present. Express attendance as a simplified fraction and percentage.

Show a method. Explain a check or counterexample.

L010 Recall & Review



Fractions and percentages of amounts

Fresh evidence: prove the objective

Solve a new question without prompts. Explain one check, then correct one error in your working.

Objective: Use fractions and percentages as operators, recover a whole from a known fraction, and explain the chosen reference amount.

Write the next practice step before you leave. It must test the method again, not simply copy today's example.

Feedback language

Use the full phrases before the abbreviations.



What Went Well (WWW)

I selected a suitable representation or multiplier and kept the reference amount clear.

Point to the method, representation, reasoning or check that improved.

Even Better If (EBI)

I will state the whole/part, show each operation and check that the size of my answer is reasonable.

Set one precise next-step action and test it on a fresh question.

Extension route



Choose this route only after the core evidence is secure.

Stretch

Find 35% of £240 using 10%, 5% and a combination.

Deep challenge

A class has 18 of 24 learners present. Express attendance as a simplified fraction and percentage.

Explain your reasoning clearly enough that another learner could check it.