

Percentage change

Pearson Edexcel GCSE Mathematics 1MA1

Foundation and Higher • L011

Number and proportion • Review v0.9

The goal and the evidence

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

Use multipliers for percentage change and reversal.

Distinguish simple interest from repeated growth.

Starting-point diagnostic

R1–R3 • Attempt without notes

20% of 60; 20% as decimal

$\frac{3}{4}$ of a whole is 30. Find whole.

125% as a decimal

Percentage multipliers

20% rise: $60 \times 1.2 = 72$

Your turn: £80 decreased by 15%

What percentage remains?

Reverse percentages

£72 after 20% off: $72 \div 0.8 = £90$

Your turn: 10% rise gives £66.

Recover the original 100%.

Measuring a change

40 to 50: $(10 \div 40) \times 100\% = 25\%$

Your turn: rise from 60 to 72

Divide the change by the original.

Simple interest

£200 at 5% for 3 years: $£10 \times 3$

Final amount = £230

Your turn: £300, 4%, 2 years.

LABEL THE ORIGINAL AS 100%

Forward change: multiply. Reverse: divide.

Every percentage needs a reference amount.

Diagnostic pause

Choose and explain before moving on.

£72 after 20% off. Original?

A £86.40 B £90 C £57.60

Careful variation

A1 • Explain your decisions

Write multipliers for a 5% rise, 5% fall, 50% rise and 50% fall. Apply each to 80.

Show your method and check the result.

Independent application

A2 • Without prompts

Find (a) £90 after a 10% reduction (b) original if a 25% reduction gives £60 (c) percentage increase from 80 to 100.

Show your method and check the result.

Use the method in context

A3 • Explain your decisions

A £100 price rises 20%, then the new price falls 20%.
Find the final price and explain why it is not £100.

Show your method and check the result.

Intentional practice feedback

Read after attempting A3

£96: $100 \times 1.2 \times 0.8$.

Check the interpretation as well as the arithmetic.

A claim to test

C1 • Explain your decisions

A price falls from £80 to £60. What percentage increase returns it to £80? Explain the changed base.

Show your method and check the result.

Deepen the reasoning

C2 • Explain your decisions

Compare £100 at 10% simple interest for 2 years with a 10% increase applied twice. Explain the difference.

Show your method and check the result.

Retrieval without notes

Q1–Q6 • Use full prompts in your workbook

Q1–Q3

20% rise multiplier
£80 less 25%
10% rise gives 55:
original?

Q4–Q6

40 to 50: % rise
200, 5%, 2 years:
interest
 $\frac{3}{4}$ of 28

Independent exit evidence

P1 • 2 marks • Without notes

Decrease £120 by 15%. Show a multiplier. [2]

Show working. Teacher review follows.

Independent exit evidence

P2 • 2 marks • Without notes

A price after a 20% rise is £96. Find the original 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

L012: Number checkpoint and feedback

Complete F1 tomorrow without notes.

Read and attempt F2; bring one question.

Optional stretch

A coat costs £68 after a 15% reduction. Find its original price.

Show a method. Explain a check or counterexample.

Optional deep challenge

A price rises 20% and then falls 20%. Explain the net change using multipliers.

Show a method. Explain a check or counterexample.

L011 Recall & Review



Percentage change and reverse percentages

Fresh evidence: prove the objective

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

Objective: Use multipliers for percentage change, recover an original value and distinguish simple interest from repeated growth.

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

A coat costs £68 after a 15% reduction. Find its original price.

Deep challenge

A price rises 20% and then falls 20%. Explain the net change using multipliers.

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