

Slide by slide delivery map

Pearson Edexcel GCSE Mathematics 1MA1 • L011

20 slides • 60 minutes • Teacher use only • Lesson resources

REACH FOR THE STAR | GCSE MATHEMATICS

01 Percentage change 1 min Recall

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

02 The goal and the evidence 1 min Recall

L009 FDP; L010 percentage operators and recovering a whole; division and decimal multiplication.

03 Starting-point diagnostic 5 min Recall

If learners subtract the percentage from the final value to reverse, label the original as 100% and the final as 80% or 120%. If increase/decrease are claimed to cancel, test £100 up 20% then down 20%: £96. Recheck £54 after a 10% fall: original £60.

04 Percentage multipliers 1 min Discover

£68. 85% remains; $80 \times 0.85 = 68$.

05 Reverse percentages 4 min Discover

£60. 66 is 110%; divide by 1.1.

Delivery continued

06 Measuring a change 4 min Discover

20%. The increase is 12 compared with original 60.

07 Simple interest 4 min Discover

£324. £12 each year; £24 interest plus £300.

08 LABEL THE ORIGINAL AS 100% 2 min Discover

Identify which value represents 100%. Write $\text{new} = \text{original} \times \text{multiplier}$, then multiply forwards or divide backwards. Percentage change = $\text{change} \div \text{original} \times 100\%$. Simple interest uses the same original principal each year; add the accumulated interest at the end.

09 Diagnostic pause 3 min Apply

After a 20% reduction, a price is £72. Original price? A £86.40, B £90, C £57.60. B: $72 \div 0.8$. A adds 20% of the wrong base.

10 Careful variation 4 min Apply

$1.05 \rightarrow 84$; $0.95 \rightarrow 76$; $1.5 \rightarrow 120$; $0.5 \rightarrow 40$. Retain 100% before adding or subtracting the change.

Delivery continued

11 Independent application 5 min Apply

£81; £80; 25%. The relevant base is always the original.

12 Use the method in context 4 min Apply

£96: $100 \times 1.2 \times 0.8$. The fall is 20% of £120, which is £24.

13 Intentional practice feedback 2 min Apply

Core examples are non-calculator friendly. Optional check after A3: $100 \times 1.2 \times 0.8 = 96$. Keep intermediate values unrounded; use ordinary multipliers rather than a calculator-specific % key.

14 A claim to test 4 min Challenge

33 $\frac{1}{3}$ %: the rise is $20/60 = 1/3$ of the reduced price. The original fall was 25%, but reversal uses a different base.

15 Deepen the reasoning 4 min Challenge

Simple: £120. Repeated growth: £121. Simple adds £10 each year; repeated growth adds £10 then £11.

Delivery continued

16 Retrieval without notes 4 min Prove

Answers: 1.2, 60, 50, 25, 20, 21. Completion is not mastery.

17 Independent exit evidence 2 min Prove

0.85×120 M1; £102 A1. A reduction leaves 85%.

18 Independent exit evidence 3 min Prove

£80 B1; $80 \times 1.2 = 96$ B1. Reverse by division.

19 Feedback and next steps 2 min Prove

If learners subtract the percentage from the final value to reverse, label the original as 100% and the final as 80% or 120%. If increase/decrease are claimed to cancel, test £100 up 20% then down 20%: £96. Recheck £54 after a 10% fall: original £60.

20 Before the next lesson 1 min Recall

A checkpoint identifies what to practise next. Work without notes first, mark the first decision that failed, repair it, and test with a fresh question after a delay. A score is evidence, not a grade or proof of mastery.

Recall & Review: feedback and extension integration

Source-integrated WWW/EBI and extension page

Lesson L011: Percentage change and reverse percentages

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

Timing for a 60-minute lesson

0-7 Connect & Check; 7-14 Share; 14-25 Present/model; 25-44 Apply route choice/practice; 44-52 independent exam-style check; 52-60 Recall & Review, WWW/EBI and next step.

Recall & Review evidence

At the end of the lesson, solve a fresh question without prompts, explain a check, correct one error and record the next practice step.

What Went Well (WWW)

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

Even Better If (EBI)

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

Integrated stretch and deep challenge

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.

Teacher use

Use the WWW/EBI prompts to write mathematics-specific feedback linked to the objective. Do not accept generic praise; feedback should identify the method, representation, reasoning or checking step that improved, then set a fresh next-step question.

Assessment evidence to inspect: Check the formative mini-test and independent workbook response against the objective. Use the teacher answers or mark guidance; group errors for reteaching. Non-calculator core; optional calculator check.