

CUMULATIVE CHECKPOINT 2 AND FEEDBACK

GCSE Mathematics 1MA1 - L040 - 60 minutes

Week 14 - Reach for the Star Gold Standard

L040 visual model

Number

35% of £240

tag -> repair -> prove

Algebra

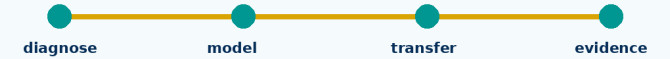
$5(2x-1)=3x+16$

tag -> repair -> prove

Geometry

$V=\pi r^2 h$

tag -> repair -> prove



Objective and lesson route

Connect & Check

Apply and explain earlier number, algebra and geometry independently. Diagnose method errors and complete a targeted repair.

Running order: Connect & Check -> Share -> Present -> Apply -> Recall & Review

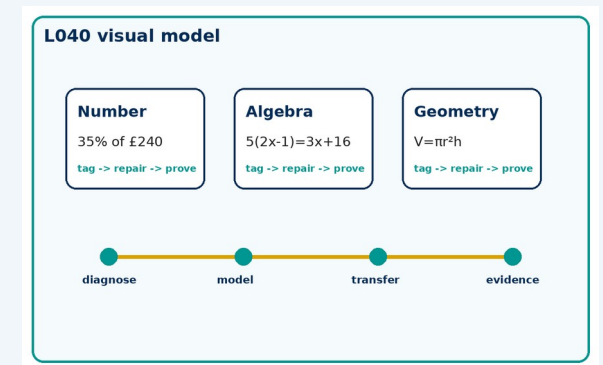
Non-calculator first attempt. Calculator permitted only for explicitly labelled check questions.

Baseline: what do you already know?

[Connect & Check](#)

Without notes, answer three retrieval questions: one number, one algebra and one geometry.

Tag any uncertainty as method, operation, unit or diagram.



Choose your route

[Share](#)

A - Visual: sketch, annotate or use the diagram.

B - Method: table, formula or calculation chain.

C - Explain: sentences showing why the method works.

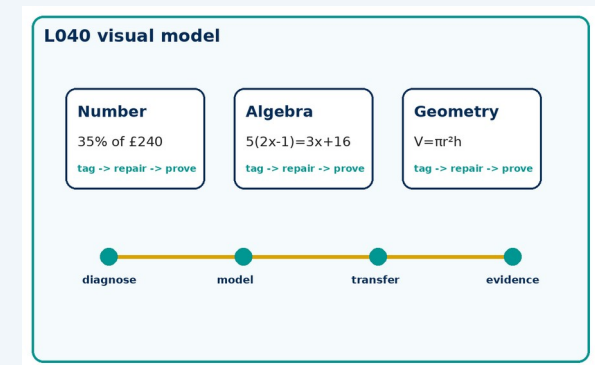
Same destination. Different journey.

Model the key method

Present

Use the repair cycle: identify the first incorrect decision, replace it with a correct method, then test it on a matched question.

A repaired answer is not secure until it works without the prompt.



Worked example

Present

A rectangle is 12 cm by 8 cm. A 3 cm by 2 cm corner is cut out. Find the remaining area and perimeter. Show a check.

What is the first decision? What check proves it?

Misconception check

Present

Where might the first incorrect decision happen?

What would the learner do if they repeated the same method?

What fresh question proves the repair?

Supported practice

Apply

Find 35% of £240 and explain the reference whole.

Solve $5(2x - 1) = 3x + 16$ and check.

Use the scaffold first, then remove it.

Independent practice: scaffold removed

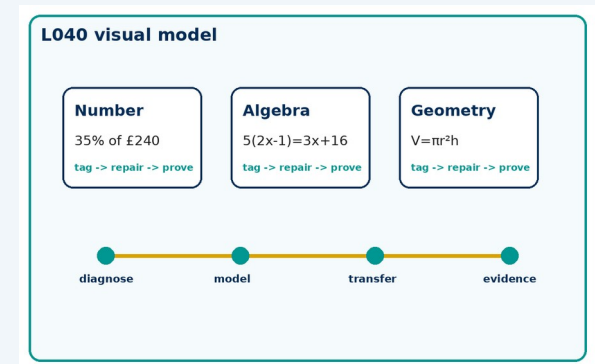
Apply

Find 35% of £240 and explain the reference whole.

Solve $5(2x - 1) = 3x + 16$ and check.

A cylinder has radius 4 cm and height 5 cm. Find volume exactly.

Show working and a separate check.



Exam-style practice

Apply

A rectangle is 12 cm by 8 cm. A 3 cm by 2 cm corner is cut out. Find the remaining area and perimeter. Show a check.

Mark the method, answer and check separately.

Stretch and deep challenge

Apply

Stretch: A cylinder has radius 4 cm and height 5 cm. Find its volume exactly, then state the units of surface area.

Deep challenge: A learner uses $8^2 + 15^2 = 17$ in a Pythagoras check. Identify and repair the error.

Self-mark and repair

Apply

Identify the first decision that went wrong.

Repair one answer, then solve a fresh matched question without prompts.

Independent exit evidence

Recall & Review

Solve one fresh mixed question without notes.

Write the specific next-practice target, not a vague topic name.

This is the evidence against the objective.

Distance travelled

Recall & Review

Compare your baseline with the exit evidence.

WWW: What is now more accurate, complete or clearly explained?

EBI: What one action will improve your next answer?

Core answers

Teacher check

£84; the whole is £240.

$x = 3$. Substitute: $5(6-1)=25$ and $9+16=25$.

$80\pi \text{ cm}^3$. Surface area would be in cm^2 .

Area = 90 cm^2 ; perimeter = 40 cm.



L040 teacher notes

Check degree/calculator conditions where relevant.

Retain baseline, repair and exit evidence.

Next: L041 Coordinates, gradient and intercept

L040 Recall & Review

Cumulative checkpoint 2 and feedback



Fresh evidence: prove the objective

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

Objective: Apply and explain earlier number, algebra and geometry independently.

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 used my working and assessment evidence to identify the exact mathematical step that was secure and the specific misconception that needs attention.

Identify the mathematical method, representation, reasoning or check that improved.

Even Better If (EBI)

I will correct one precise step, explain why the correction works and complete a fresh delayed question without the original scaffold.

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 cylinder has radius 4 cm and height 5 cm. Find its volume exactly, then state the units of surface area.

Deep challenge

A learner uses $8^2 + 15^2 = 17$ in a Pythagoras check. Identify and repair the error.

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