

Cumulative checkpoint and feedback

Pearson Edexcel GCSE Mathematics 1MA1 • L024
Foundation and Higher • 60 minutes • Lesson resources

REACH FOR THE STAR | GCSE MATHEMATICS

Use independent evidence across number, proportion and algebra to identify a specific error and demonstrate a repaired method.

Work without a calculator except where a check is invited. Write on the lines or replace them with typed answers. Attempt before reading intentional practice feedback.

Connect & Check

Diagnostic: evidence used to choose teaching. Transfer: use a method in a fresh situation.

Reference whole: quantity treated as 100%. Equivalent: same mathematical value or relationship.

R1

Without notes: calculate $\frac{1}{2} + \frac{1}{3}$ and 15% of 80.

R2

Without notes: share 40 in ratio 3:5 and solve $3x+2=17$.

R3

Without notes: expand $2(x-3)$ and find the fifth term of $3n+1$.

Share | In pairs, predict the first step for this problem: Different errors need different repairs. A denominator error concerns the size of the fraction unit; a percentage error may use the wrong whole; an equation error may break equality. Compare your reasons before using the worked model.

Present through worked examples

Different errors need different repairs. A denominator error concerns the size of the fraction unit; a percentage error may use the wrong whole; an equation error may break equality. Identify the first incorrect decision rather than repeating the same question.

D1

Model repair: $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$. Now calculate $\frac{3}{4} + \frac{1}{6}$ with common units.

D2

Model repair: 20% off gives £64, so original = $64 \div 0.8 = £80$. Now 25% off gives £54. Find original.

D3

Model repair: $2(x+3)=14$ gives $x=4$. Now solve $3(x-2)=15$ and check.

D4

Model repair: 5, 8, 11, ... is $3n+2$, not $5n$. Now find the linear n th term of 6, 10, 14, ...

Apply with less support

Attempt Recall without notes. Choose one matched Discover repair. Use new Apply questions without the scaffold, then take the exit check. Record support and a delayed independent attempt; do not infer a grade from this small sample.

A1

Calculate $2\frac{2}{3} + 1\frac{1}{4}$, then $(2\frac{2}{3}) \div (1\frac{1}{4})$. Explain why the methods differ.

A2

Solve $4x - 3 = 2x + 9$; expand $-2(x - 4)$; rearrange $y = 3x + 2$ for x .

A3

A £5 fee plus £3 per visit must cost at most £24. Find the maximum whole visits and check the bill.

Optional support: Name the operation before choosing a method.

Optional check after A3: $5 + 3 \times 6 = 23$ and $5 + 3 \times 7 = 26$. The maximum integer decision depends on the budget, not on rounding to the nearest integer.

Apply and extend reasoning

C1

A learner gets 6/6 immediately after reading retrieval answers. What further evidence would show retained understanding?

C2

A price rises 25% then falls 20%. Does it return to the start? Compare a 25% fall after the rise.

Intentional practice feedback — read after attempting

A1: $11/12$; $8/3$.

A2: $x=6$; $-2x+8$; $x=(y-2)/3$.

A3: 6 visits; £23. Seven visits would cost £26.

C1: A fresh independent task after a delay, with explanation and recorded support.

C2: Yes: $1.25 \times 0.8 = 1$. A 25% fall leaves 0.9375 of original.

Correct one response and explain your change. Stretch is available to either tier; temporary support needs do not determine entry tier.

Recall & Review through retrieval

Work without notes. Six retrieval points; this attempt does not establish mastery. Equivalent exact numeric forms are accepted. Where accuracy is requested, also state the requested form in your written work.

Q1 $\frac{1}{2} + \frac{1}{3}$

Q2 15% of 80

Q3 First share: 40 in ratio 3:5

Q4 Solve $3x+2=17$

Q5 Fifth term of $3n+1$

Q6 $-8 - (-3)$

Intentional retrieval feedback

Q1 $\frac{5}{6}$; Q2 12; Q3 15; Q4 5; Q5 16; Q6 -5 . Correct and retry tomorrow, then in one week.

Prove independently and improve

P1–P2: five minutes without notes; 4 marks. Your teacher reviews explanations and method marks.
P3 has no mark.

P1

Solve $2(x+4)=3x+1$ and check in the original equation. [2]

P2

Share 63 in ratio 2:5. Explain the number of equal parts. [2]

P3

Explain one corrected error. Set a fresh question and a date to check it without support.

Teacher feedback: _____

Fresh question and retry date: _____

Delayed independent evidence: _____

Prepare for the next lesson

L025: Angle facts and parallel lines

F1

Tomorrow calculate $\frac{3}{5} + \frac{1}{4}$ and solve $5x - 2 = 18$ without notes.

F2

Before L025, find the other angle on a straight line when one angle is 65° . Name the fact used.

Read and prepare

Angles on a straight line sum to 180° . Angles around a point sum to 360° . Vertically opposite angles are equal. The next lesson uses these facts and parallel-line relationships to calculate missing angles and explain each step.

Digital workbook: save locally where available; export a JSON backup before closing or moving the file. Restore only this lesson/version. Printing records answers, not mastery. Live browser checks remain pending; use Word/PDF if required.

Optional extension activities

Allow 10–15 minutes for learners who have secured the main practice. Show a method, explain a check and justify your conclusion.

Stretch

Solve $2x+5=17$, then give the third term of $3n+2$.

Deep challenge

A learner extends 2,5,8,11 with 15. Diagnose and find the 20th term.

Recall & Review: feedback and extension integration

Lesson L024: Cumulative checkpoint and feedback

Objective: Use independent evidence across number, proportion and algebra to identify a specific error and demonstrate a repaired method.

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 one check, correct one error and record the next practice step.

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.

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.

Integrated stretch and deep challenge

Stretch: Solve $2x+5=17$, then give the third term of $3n+2$.

Deep challenge: A learner extends 2,5,8,11 with 15. Diagnose and find the 20th term.

My next-step response
