

Ratio and sharing

Pearson Edexcel GCSE Mathematics 1MA1

Foundation and Higher • L013

Number and proportion • Review v0.9

The goal and the evidence

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

Interpret, simplify and use ratios to share amounts.

Distinguish a part-to-part ratio from part-to-whole.

Starting-point diagnostic

R1–R3 • Attempt without notes

Simplify $12/18$; HCF(12,18)

$2/5$ of 50

$3/4$ of a whole is 24. Find whole.

Equivalent ratios

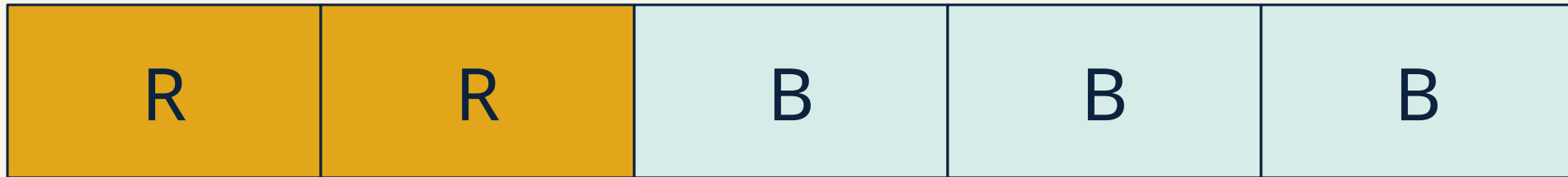
$$12:18 = 2:3$$

Your turn: 15:25

Divide both terms by the same factor.

Two red parts, three blue parts

Explain the representation



Red:blue = 2:3 Red:total = 2:5

Part and whole

Red:blue = 2:3

Red is $\frac{2}{5}$ of the total.

Your turn: red:blue = 3:4

Sharing a total

£50 in ratio 2:3 → £10 per part

Shares £20 and £30

Your turn: £56 in ratio 3:4

One share is known

$$A:B = 2:5 \text{ and } B = 30$$

One part = 6, so $A = 12$

Your turn: $A:B = 3:7$ and $B = 35$

LABEL WHAT THE GIVEN AMOUNT MEANS

Total, one share or the difference?

Match it to the right number of parts.

Diagnostic pause

Choose and explain before moving on.

Red:blue = 2:3. Red / total?

A $\frac{2}{3}$ B $\frac{2}{5}$ C $\frac{3}{5}$

Careful variation

A1 • Explain your decisions

Simplify 6:9, 12:18 and 20:30. What is unchanged?

Show your method and check the result.

Independent application

A2 • Without prompts

Share 72 in ratio 5:3. Then, for $A:B=4:7$ and $A=20$, find B.

Show your method and check the result.

Use the method in context

A3 • Explain your decisions

A mixture uses concentrate:water=1:4. Make 750 ml of mixture. How much of each is needed?

Show your method and check the result.

Intentional practice feedback

Read after attempting A3

150 ml concentrate and 600 ml water.

Check the interpretation as well as the arithmetic.

A claim to test

C1 • Explain your decisions

$A:B=2:3$ and $B=12$. A learner says $A=8$, so A is $\frac{2}{3}$ of the total. Identify what is correct and repair the claim.

Show your method and check the result.

Deepen the reasoning

C2 • Explain your decisions

A:B=3:5 and B is 14 more than A. Find A and B.

Show your method and check the result.

Retrieval without notes

Q1–Q6 • Use full prompts in your workbook

Q1–Q3

Parts in 3:5

40 shared 3:5: first share

$12:18 = 2:?$

Q4–Q6

2:3: first / total

4:7; first 20: second?

35% of 80

Independent exit evidence

P1 • 2 marks • Without notes

Share £63 in ratio 2:5. Show the value of one part.
[2]

Show working. Teacher review follows.

Independent exit evidence

P2 • 2 marks • Without notes

A:B=3:5. Express A as a fraction of the total and explain the denominator. [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

L014: Scale and proportion

Complete F1 tomorrow without notes.

Read and attempt F2; bring one question.

Optional stretch

Split £126 in ratio 2:3:4 and check the parts total.

Show a method. Explain a check or counterexample.

Optional deep challenge

A sum is split $A:B=3:5$ and $B:C=2:3$. Find $A:B:C$ in whole numbers.

Show a method. Explain a check or counterexample.

L013 Recall & Review



Ratio and sharing

Fresh evidence: prove the objective

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

Objective: Interpret ratios, simplify them and share quantities using equal parts while distinguishing part-to-part from part-to-whole.

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

Split £126 in ratio 2:3:4 and check the parts total.

Deep challenge

A sum is split $A:B=3:5$ and $B:C=2:3$. Find $A:B:C$ in whole numbers.

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