

Teacher guide and workbook answers

Pearson Edexcel GCSE Mathematics 1MA1 • L015

60 minutes • Foundation and Higher • Teacher use only • Lesson resources

REACH FOR THE STAR | GCSE MATHEMATICS

Purpose and prerequisites

Compare prices using a common unit. Interpret the best buy in terms of cost, quantity needed and waste.

L013 ratio; L014 unitary method; decimal division and grams to kilograms.

Selected specification content: R1 R11. These lessons revisit shared content; they do not complete every aspect of those statements.

Preparation and support

Prepare mini-whiteboards, printed fallbacks and a teacher calculator. Use ratio tables, algebra tiles, balance diagrams and number lines as appropriate. Confirm save/export/restore in the intended environment; browser QA remains pending. Distribute only the learner package.

Access: pre-teach vocabulary and read symbols aloud. Scaffold: model the first decision, offer a worked-example or inverse-check frame. Core: remove prompts for A2 and P1–P2. Stretch: C1–C2 deepen reasoning for either tier. Record the support used, not a fixed ability label.

Evidence and pacing

The delivery map totals 60 minutes. Use the recall and hinge to select a repair; the suggested one-third error trigger is a planning judgement, not a validated threshold. If errors are widespread, use two minutes from independent practice and defer C2. P1–P2 need teacher marking. The mini-test and exam practice are delayed/additional activities, not extra tasks squeezed into the hour.

A: 4 pens for £2; B: 10 for £6. Lower unit price? A A, B B, C equal. Answer A: 50p compared with 60p.

Recall and guided-practice answers

R1

0.75 kg. Divide by 1000.

R2

£0.50 each. Cost per item.

R3

£0.80. One fifth of four pounds.

D1

£0.60 per apple. $4.80 \div 8 = 0.60$; $8 \times 0.60 = 4.80$.

D2

£4.80/kg. $3.60 \div 0.75 = 4.80$.

D3

500 g pack is cheaper per kg: £4 versus £4.20. Compare equal masses, not ticket prices.

D4

Three loose items cost less: £1.50. The pack has a lower unit price but a higher bill.

Application and challenge answers

A1

All £6/kg. Quantity and cost scale together.

A2

£4.50/kg and £4/kg; 600 g is better value. Both prices use one kilogram.

A3

Three packs of 5 cost £9; two packs of 8 cost £10. Choose packs of 5. Round pack counts up; leftovers are allowed.

C1

Example: 500 g for £2 is £4/kg; 1 kg for £5 is £5/kg. One valid counterexample disproves always.

C2

A £6/kg; B £4/kg. B is cheaper per kg. 20% is applied to the £5 price, not to the mass.

Calculator guidance: Calculator check after A2: enter $1.80 \div 0.4$ and $2.40 \div 0.6$. Expect 4.5 and 4. Keep unrounded values when comparing; money answers use pounds and pence.

Independent evidence and next steps

P1

3.20 ÷ 0.8 M1; £4/kg A1. Accept scaling 800 g to 1000 g.

P2

60p and 50p per item B1 both; 10-item pack B1. Compare the same units.

P3

Individual reflection. Record support and delayed evidence; completion is not mastery.

F1

£4.40/kg. Multiply by four.

F2

£12 and £36; one part is £12. Four parts make the total.

Retrieval answers: 50, 4, $\frac{3}{4}$, 7.2, 4, 12. Exact signed decimals/fractions/mixed numbers are accepted; unsupported notation goes to review. No automatic method marks. For rounding, equivalent numerical values may pass retrieval; the teacher checks stated accuracy and required trailing zeros in written work.

Reteaching and release

If quantity is divided by price, read the resulting units aloud. If g and kg are mixed, convert first. Recheck 500 g for £2.20 as £4.40/kg. Separate lowest unit price from lowest total spend.

Practice feedback is intentionally visible. Full assessment answers, this guide and delivery notes are teacher-only. Local saving is browser dependent; no account service is included. Completed resources enter Review; human approval and outstanding browser checks remain required.

Optional extension answers

Stretch

A 750 g pack costs £2.40 and a 1.2 kg pack costs £3.60. Which is better value per kg?

Answer and reasoning: £3.20/kg versus £3.00/kg, so 1.2 kg pack.

Deep challenge

A 20% discount applies to the 750 g pack. Does the best buy change?

Answer and reasoning: 750 g pack becomes £1.92, or £2.56/kg; it is now cheaper per kg.

Activate Learning lesson cycle

Connect & Check: state the objective and diagnose prior knowledge. Share: pairs predict and compare methods. Present: explain or uncover the model. Apply: fade support for independent practice and optional stretch. Recall & Review: use a fresh question and feedback to decide the next step.

Recall & Review: feedback and extension integration

Source-integrated WWW/EBI and extension page

Lesson L015: Unit rates and best buys

Objective: Compare prices using a common unit. Interpret the best buy in terms of cost, quantity needed and waste.

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 750 g pack costs £2.40 and a 1.2 kg pack costs £3.60. Which is better value per kg?

Deep challenge: A 20% discount applies to the 750 g pack. Does the best buy change?

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.