



Maths Paper 1: answer guide

Warm-up level · 25 questions · 25 minutes · no calculator



Primary Tools

How to mark

- Give 1 mark for each correct answer. There are no half marks.
- Use the answer key below, then read the explanation and tip for every question your child got wrong – and for any they guessed.
- Fill in the topic table at the end. A pattern (for example, losing marks on several fraction questions) tells you what to practise next.

Answer key

Q	Answer	Q	Answer	Q	Answer	Q	Answer	Q	Answer
1	D 70,000	6	A 416	11	C 26 cm	16	C 65p	21	C 35 cm ²
2	B 623	7	D 2,500 ml	12	D 29	17	A 55°	22	E $\frac{5}{8}$
3	E 9	8	B $\frac{4}{10}$	13	B 252	18	E 600 g	23	B (5, 2)
4	C 21	9	C 19	14	A 9	19	D 5	24	D 32
5	A 5°C	10	E 20	15	E 0.709	20	B 8:35 pm	25	A 5

What the score means

Score	What it suggests
23-25	Secure at warm-up level. Move on to the standard papers (4-8).
18-22	A good start. Read the tips for the questions missed, then try the next paper.
12-17	Getting there. Use the topic table to choose one or two topics to practise before the next paper.
0-11	Some foundations need work. Practise the topics without a timer first, then come back to timed papers.

This is a warm-up paper, so scores will usually be higher than on the standard and stretch papers. Scores on practice papers are a guide only – they don't predict a pass mark, which varies by area and year.



Question by question

Each answer shows how to work it out, and a **Next time** tip aimed at the most common mistake.

Question 1 · Answer D: 70,000

Number & place value – Value of digits

What is the value of the digit 7 in the number 372,845?

372,845 is three hundred and seventy-two thousand, eight hundred and forty-five. The 7 is in the ten-thousands column, so its value is 70,000.

Next time: Write the number in a place-value grid (HTh, TTh, Th, H, T, O) and read the column heading above the digit.

Question 2 · Answer B: 623

Calculation – Column addition

Work out $348 + 275$.

Ones: $8 + 5 = 13$, write 3, carry 1. Tens: $4 + 7 + 1 = 12$, write 2, carry 1. Hundreds: $3 + 2 + 1 = 6$. Answer 623.

Next time: Write carried digits small under the next column so you don't forget to add them. 513 and 613 both come from missing a carry.

Question 3 · Answer E: 9

Factors, multiples & primes – Factors

Which of these numbers is a factor of 36?

$36 \div 9 = 4$ exactly, so 9 is a factor of 36. None of the others divide into 36 without a remainder.

Next time: List factor pairs in order: 1×36 , 2×18 , 3×12 , 4×9 , 6×6 . Then check each option against your list.

Question 4 · Answer C: 21

Fractions – Fraction of an amount

What is $\frac{3}{4}$ of 28?

Find one quarter first: $28 \div 4 = 7$. Three quarters is $3 \times 7 = 21$.

Next time: Divide by the bottom number, then multiply by the top number. 7 is only one quarter – remember the second step.

**Question 5 · Answer A: 5°C**

Number & place value - Negative numbers

At midnight the temperature was -3°C. By midday it had risen by 8 degrees. What was the temperature at midday?

Start at -3 on a number line and count 8 steps up: 3 steps takes you to 0, then 5 more takes you to 5. The temperature was 5°C.

Next time: Sketch a quick number line. Count up to zero first, then count on what's left.

Question 6 · Answer A: 416

Calculation - Column subtraction

Work out $702 - 286$.

Ones: $2 - 6$ can't be done, so exchange. The tens column is 0, so exchange from the hundreds: 700 becomes 600, the tens become 9 and the ones become 12. $12 - 6 = 6$, $9 - 8 = 1$, $6 - 2 = 4$. Answer 416.

Next time: Never subtract the smaller digit from the bigger one in a column - that's how 584 happens. Check by adding: $416 + 286$ should make 702.

Question 7 · Answer D: 2,500 ml

Measurement - Converting units

How many millilitres are there in 2.5 litres?

1 litre = 1,000 ml, so 2.5 litres = $2.5 \times 1,000 = 2,500$ ml.

Next time: Learn the key facts: 1 l = 1,000 ml, 1 kg = 1,000 g, 1 km = 1,000 m, 1 m = 100 cm. Multiplying by 1,000 moves digits three places left.

Question 8 · Answer B: $\frac{4}{10}$

Fractions - Equivalent fractions

Which fraction is equivalent to $\frac{2}{5}$?

Multiply the top and bottom of $\frac{2}{5}$ by 2: $\frac{2}{5} = \frac{4}{10}$.

Next time: Whatever you do to the bottom number you must do to the top. $\frac{2}{10}$ only changed the bottom.

Question 9 · Answer C: 19

Algebra - Sequences

What is the next number in this sequence? 3, 7, 11, 15, ...

The numbers go up by 4 each time. $15 + 4 = 19$.

Next time: Write the difference between each pair of numbers above the sequence before deciding the next term.



Question 10 · Answer E: 20

Decimals & percentages – Percentage of an amount

What is 25% of 80?

25% is the same as one quarter. $80 \div 4 = 20$.

Next time: Learn the easy ones: 50% = half, 25% = quarter, 10% = divide by 10. Then build others from these.

Question 11 · Answer C: 26 cm

Perimeter, area & volume – Perimeter

This rectangle is 9 cm long and 4 cm wide. What is its perimeter?

Perimeter is the distance all the way round: $9 + 4 + 9 + 4 = 26$ cm.

Next time: Perimeter means add all the sides; area means multiply length $\times$ width. 36 cm is the area mixed up with the perimeter.

Question 12 · Answer D: 29

Factors, multiples & primes – Prime numbers

Which of these is a prime number?

29 has only two factors, 1 and 29. The others are not prime: $21 = 3 \times 7$, $27 = 3 \times 9$, $33 = 3 \times 11$, $39 = 3 \times 13$.

Next time: Test for 3: add the digits. If the total divides by 3, so does the number ($2 + 1 = 3$, so 21 divides by 3).

Question 13 · Answer B: 252

Calculation – Short multiplication

Work out 36×7 .

Partition 36 into $30 + 6$. $30 \times 7 = 210$ and $6 \times 7 = 42$. $210 + 42 = 252$.

Next time: Partition the bigger number into tens and ones, multiply each part, then add. Estimate first: $40 \times 7 = 280$, so the answer must be a little less than 280.

Question 14 · Answer A: 9

Algebra – Missing numbers

What number goes in the box? $\square \times 6 = 54$

Use the inverse: $54 \div 6 = 9$. Check: $9 \times 6 = 54$.

Next time: To undo $\times$ use $\div$, and to undo $+$ use $-$. 48 and 60 come from subtracting or adding 6 instead.



Question 15 · Answer E: 0.709

Decimals & percentages – Comparing decimals

Which of these numbers is the largest?

Give every number three decimal places: 0.700, 0.650, 0.690, 0.071, 0.709. The largest is 0.709.

Next time: Add zeros so every decimal has the same number of places, then compare like whole numbers. Longer doesn't always mean bigger.

Question 16 · Answer C: 65p

Measurement – Money

Sam buys 3 pens that cost 45p each. He pays with a £2 coin. How much change does he get?

$3 \times 45\text{p} = 135\text{p} = £1.35$. Change: $£2.00 - £1.35 = 65\text{p}$.

Next time: Two-step questions: write step 1 (the cost) and step 2 (the change) on separate lines. £1.35 is only the first step.

Question 17 · Answer A: 55°

Geometry – Angles on a straight line

The diagram shows two angles on a straight line. What is the size of angle x?

Angles on a straight line add up to 180° . $180^\circ - 125^\circ = 55^\circ$.

Next time: Remember: straight line = 180° , all the way round a point = 360° , triangle = 180° . 235° comes from using 360° .

Question 18 · Answer E: 600 g

Ratio & proportion – Scaling recipes

A recipe for 4 people uses 300 g of flour. How much flour is needed for 8 people?

8 people is twice as many as 4 people, so you need twice as much flour: $300\text{ g} \times 2 = 600\text{ g}$.

Next time: Ask 'how many times bigger?' first ($8 \div 4 = 2$), then multiply the amount by the same number.

Question 19 · Answer D: 5

Geometry – Properties of 3D shapes

How many faces does a triangular prism have?

A triangular prism has 2 triangular faces (the ends) and 3 rectangular faces, so 5 faces altogether. It has 9 edges and 6 vertices.

Next time: Faces are flat surfaces, edges are where two faces meet, vertices are corners. Picture a tent shape and count each type separately.



Question 20 · Answer B: 8:35 pm

Measurement - Time

A film starts at 6:45 pm and lasts 1 hour 50 minutes. What time does it finish?

Add the hour: 6:45 pm + 1 hour = 7:45 pm. Then add 50 minutes: 15 minutes takes you to 8:00 pm, and 35 more makes 8:35 pm.

Next time: Add hours first, then count minutes on to the next o'clock before adding the rest. Time doesn't work in hundreds.

Question 21 · Answer C: 35 cm²

Perimeter, area & volume - Area of rectangles

What is the area of a rectangle that is 7 cm long and 5 cm wide?

Area = length × width = 7 × 5 = 35 cm².

Next time: Area is measured in square units (cm²) - that's a clue to multiply. 24 cm is the perimeter of this rectangle.

Question 22 · Answer E: $\frac{5}{8}$

Fractions - Adding fractions

Work out $\frac{1}{4} + \frac{3}{8}$.

Change quarters into eighths: $\frac{1}{4} = \frac{2}{8}$. Then $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$.

Next time: You can only add fractions with the same bottom number. Never add the bottom numbers together - that's how $\frac{4}{12}$ happens.

Question 23 · Answer B: (5, 2)

Position & direction - Translation

Point P is at (3, 5). It is moved 2 squares to the right and 3 squares down. What are its new coordinates?

Right changes the first number: 3 + 2 = 5. Down changes the second number: 5 - 3 = 2. New position (5, 2).

Next time: Coordinates are (across, up) - 'along the corridor, then up the stairs'. Right/left changes the first number, up/down changes the second.

Question 24 · Answer D: 32

Statistics - Reading bar charts

The bar chart shows how many books five children read in a month. How many books did they read altogether?

Read each bar: Ali 8, Ben 5, Cara 6, Dev 9, Ella 4. Total: 8 + 5 + 6 + 9 + 4 = 32.

Next time: Use a ruler across from the top of each bar to the scale. Write each value above its bar before adding.



Question 25 · Answer A: 5

Statistics - Comparing data

Look at the same bar chart. How many more books did Dev read than Ella?

Dev read 9 books and Ella read 4. $9 - 4 = 5$ more.

Next time: 'How many more' means find the difference - subtract. 13 comes from adding instead.



Topic table

Tick the questions your child got right and write the total for each topic. Topics where marks were lost are the ones to practise first.

Topic	Questions	Score	Skills tested
Number & place value	1, 5	/ 2	Value of digits; Negative numbers
Calculation	2, 6, 13	/ 3	Column addition; Column subtraction; Short multiplication
Factors, multiples & primes	3, 12	/ 2	Factors; Prime numbers
Fractions	4, 8, 22	/ 3	Fraction of an amount; Equivalent fractions; Adding fractions
Measurement	7, 16, 20	/ 3	Converting units; Money; Time
Algebra	9, 14	/ 2	Sequences; Missing numbers
Decimals & percentages	10, 15	/ 2	Percentage of an amount; Comparing decimals
Perimeter, area & volume	11, 21	/ 2	Perimeter; Area of rectangles
Geometry	17, 19	/ 2	Angles on a straight line; Properties of 3D shapes
Ratio & proportion	18	/ 1	Scaling recipes
Position & direction	23	/ 1	Translation
Statistics	24, 25	/ 2	Reading bar charts; Comparing data
Total		/ 25	

Ready for more? Maths Papers 2–11 follow the same short format and build from warm-up to stretch level, with an answer guide like this one for every paper. Find them at primarytools.co.uk.

This free paper may be printed for use at home or in your own classroom. Please share the link to primarytools.co.uk rather than re-uploading the file.