



11+ GL-Style Maths Practice Paper 1 — Answers

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These answers belong with JDScience 11+ GL-Style Maths Practice Paper 1. Do not open this booklet until you have finished the paper. Equivalent methods are accepted if they reach the same result.

Suggested time: Mark after the timed paper · **Answers:** 40 answers

Answers and short explanations

Use this booklet only after finishing the matching practice paper. Equivalent wording is accepted where the meaning is the same.

1. Section A — Arithmetic. Work out $58 + 247$.

Answer: 305

Why: $8 + 7 = 15$, write 5 carry 1; $5 + 4 + 1 = 10$, write 0 carry 1; $2 + 1 = 3$.

2. Work out $804 - 369$.

Answer: 435

Why: Borrow where needed: $14 - 9 = 5$, $9 - 6 = 3$, $7 - 3 = 4$, giving 435.

3. Work out 36×14 .

Answer: 504

Why: $36 \times 10 = 360$ and $36 \times 4 = 144$. $360 + 144 = 504$.

4. Work out $576 \div 16$.

Answer: 36

Why: $16 \times 36 = 576$.

5. Find the value of $7^2 - 3^3$.

Answer: 22

Why: $7^2 = 49$ and $3^3 = 27$. $49 - 27 = 22$.

6. Work out $4 \times (9 + 6)$.

Answer: 60

Why: Brackets first: $9 + 6 = 15$. $4 \times 15 = 60$.

7. Work out $18 + 12 \div 3 \times 2$.

Answer: 26

Why: $12 \div 3 = 4$, then $4 \times 2 = 8$. $18 + 8 = 26$.

8. Work out $2.75 + 1.48$.

Answer: 4.23

Why: Hundredths $5 + 8 = 13$; tenths $7 + 4 + 1 = 12$; units $2 + 1 + 1 = 4$.

9. Work out $9.6 \div 0.3$.

Answer: 32

Why: Multiply both by 10: $96 \div 3 = 32$.

10. Work out $-12 + 19$.

Answer: 7

Why: From -12 , add 19 to reach 7.

- 11.** Section B — Fractions, decimals and percentages. Work out $\frac{3}{4} + \frac{1}{8}$. Give the answer in its simplest form.
Answer: $\frac{7}{8}$
Why: $\frac{3}{4} = \frac{6}{8}$. $\frac{6}{8} + \frac{1}{8} = \frac{7}{8}$.
- 12.** Find $\frac{5}{6}$ of 42.
Answer: 35
Why: $42 \div 6 = 7$, then $7 \times 5 = 35$.
- 13.** Write 0.45 as a percentage.
Answer: 45%
Why: 0.45 is 45 hundredths.
- 14.** Write $\frac{3}{5}$ as a decimal.
Answer: 0.6
Why: $3 \div 5 = 0.6$.
- 15.** Find 25% of 84.
Answer: 21
Why: 25% is one quarter. $84 \div 4 = 21$.
- 16.** Increase 40 by 15%.
Answer: 46
Why: 10% of 40 = 4 and 5% = 2, so 15% = 6. $40 + 6 = 46$.
- 17.** A jacket costs £64. In a sale it is reduced by $\frac{1}{4}$. What is the sale price?
Answer: £48
Why: $\frac{1}{4}$ of 64 = 16. $64 - 16 = 48$.
- 18.** Section C — Ratio and proportion. Simplify the ratio 12 : 18.
Answer: 2 : 3
Why: Divide both parts by 6.
- 19.** Share £48 in the ratio 3 : 5.
Answer: £18 and £30
Why: 8 parts. $48 \div 8 = £6$. $3 \times 6 = £18$ and $5 \times 6 = £30$.
- 20.** Three identical cakes cost £4.50. How much do seven of the same cakes cost?
Answer: £10.50
Why: One cake is £1.50. $7 \times 1.50 = £10.50$.
- 21.** A recipe for 8 people uses 600 g of flour. How much flour is needed for 6 people?
Answer: 450 g
Why: $600 \div 8 = 75$ g per person. $75 \times 6 = 450$ g.
- 22.** Section D — Word problems and measures. A train leaves at 09:35. The journey lasts 1 hour 50 minutes. At what time does it arrive?
Answer: 11:25
Why: $09:35 + 1 \text{ hour} = 10:35$. $10:35 + 50 \text{ minutes} = 11:25$.
- 23.** Write 2.5 kg in grams.
Answer: 2500 g
Why: 1 kg = 1000 g.
- 24.** A rectangle is 8 cm long and 5 cm wide. Find its perimeter and its area.
Answer: Perimeter 26 cm; area 40 cm²
Why: Perimeter = $2 \times (8 + 5) = 26$ cm. Area = $8 \times 5 = 40$ cm².

25. Convert 3.2 m into centimetres.
Answer: 320 cm
Why: 1 m = 100 cm.
26. A cuboid measures 4 cm by 3 cm by 5 cm. What is its volume?
Answer: 60 cm³
Why: $4 \times 3 \times 5 = 60$.
27. A car travels 90 km in 1.5 hours at a steady speed. What is its speed in km/h?
Answer: 60 km/h
Why: $90 \div 1.5 = 60$.
28. There are 30 sweets in a bag. $\frac{2}{5}$ of them are eaten. How many sweets are left?
Answer: 18
Why: $\frac{2}{5}$ of 30 = 12 eaten. $30 - 12 = 18$.
29. Five coaches each have 48 seats. 17 seats are empty. How many passengers are there?
Answer: 223
Why: $5 \times 48 = 240$. $240 - 17 = 223$.
30. Section E — Geometry. Two angles in a triangle are 50° and 70°. What is the third angle?
Answer: 60°
Why: $180 - 50 - 70 = 60^\circ$.
31. A regular hexagon has perimeter 54 cm. What is the length of one side?
Answer: 9 cm
Why: $54 \div 6 = 9$ cm.
32. Point P is (3, 2). What are the coordinates of P after a reflection in the x-axis?
Answer: (3, -2)
Why: x stays 3; y changes sign.
33. How many faces does a triangular prism have?
Answer: 5
Why: Two triangular ends and three rectangular sides.
34. Section F — Data handling. Find the mean of 4, 9, 11 and 16.
Answer: 10
Why: Sum = 40. $40 \div 4 = 10$.
35. Find the median of 3, 8, 8, 12, 20.
Answer: 8
Why: The middle value of the ordered list is 8.
36. The range of a set of masses is 14 kg. The smallest mass is 9 kg. What is the largest mass?
Answer: 23 kg
Why: $9 + 14 = 23$ kg.
37. A fair six-sided dice is rolled. What is the probability of an even score? Give a fraction in its simplest form.
Answer: $\frac{1}{2}$
Why: 2, 4 and 6 are three of six outcomes.
38. Club members: Monday 12, Tuesday 9, Wednesday 15. What is the mean number of members per day?
Answer: 12
Why: $12 + 9 + 15 = 36$. $36 \div 3 = 12$.

39. Section G — Problem solving. A number is multiplied by 8. Then 11 is added. The result is 59. What was the number?

Answer: 6

Why: $59 - 11 = 48$, then $48 \div 8 = 6$.

40. Write 60 as a product of prime factors. Use index notation.

Answer: $2^2 \times 3 \times 5$

Why: $60 = 2 \times 2 \times 3 \times 5$.

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