

Answers & Methods

Every answer below comes with the method, because the mark on the page matters less than the thinking that produced it. This is how we teach at The Learnery: name the rule, apply it step by step, then check.

For worded maths problems we use one consistent routine: READ the question slowly; EXTRACT the numbers and what is asked; SOLVE in small steps; CHECK by working backwards or estimating. You will see it written out in full in Section D.

Section A: Verbal Reasoning

The rule always comes first: say what is changing before you chase the answer.

1. **A** Both letters jump forward 3 places each time (C-F-I-L-O and F-I-L-O-R), so the next pair is OR. Method: track each letter's jump separately.
2. **A** The first letter moves forward one (A,B,C,D,E); the second moves back one from the end (Z,Y,X,W,V). Next pair: EV.
3. **A** Letters jump two places (B,D,F,H,J); numbers rise by two (2,4,6,8,10). Next: J10.
4. **A** Both letters simply move forward one place each time (M-N-O-P-Q and A-B-C-D-E), giving QE.
5. **A** First letters move back two (Z,X,V,T,R); second letters move forward two (A,C,E,G,I). Next: RI.
6. **A** Each letter moves forward one place (C to D, A to B, T to U). Apply the same shift: D to E, O to P, G to H, giving EPH.
7. **A** Move every letter one place back: M to L, E to D, A to Z (wrapping to the end of the alphabet), L to K, giving LDZK.
8. **A** The code moves each letter forward one, so decode by moving each letter back one: C to B, V to U, T to S, giving BUS.
9. **A** Count each letter's position in the alphabet: B is 2, E is 5, D is 4, so BED is 2 5 4.
10. **A** Apply the growing shift: W+1=X, O+2=Q, L+3=O, F+4=J, giving XQOJ. Method: write the shift above each letter first.
11. **A** A kitten is a young cat; a puppy is a young dog. The relationship is 'young animal to adult animal'.
12. **A** An author creates a book; a composer creates a symphony. Match the relationship (maker to thing made), not just the topic.
13. **A** A glove is worn on a hand; a sock is worn on a foot. 'Shoe' is tempting but a sock is not worn on a shoe.
14. **A** Scarce and plentiful are opposites, so we need the opposite of ancient, which is modern.
15. **A** A library is a place that keeps books; a gallery is a place that keeps paintings.
16. **A** Look across every join: 'coME ATonce' hides MEAT. Method: slide a four-letter window across each pair of neighbouring words.

17. A Across the join of 'his and': hi(S AND) gives SAND.
18. A Across the join of 'much interest': mu(CH IN)terest gives CHIN.
19. A Across the join of 'great ripe': grea(T RIP)e gives TRIP.
20. A Across the join of 'bingo at': bin(GO AT) gives GOAT.
21. A Apple, banana, plum and cherry are fruits; a carrot is a vegetable.
22. A Run, sprint, jog and dash are all ways of moving fast; sit is not a way of moving.
23. A Oak, elm, birch and willow are trees; a rose is a flower.
24. A Violin, cello, harp and guitar are string instruments; a trumpet is a brass instrument.
25. A Triangle, square, pentagon and hexagon are made of straight sides; a circle has no straight sides.

Section B: Non-Verbal Reasoning

Non-verbal reasoning is pattern-spotting: ask what changes (position, rotation, size, shading, number) and what stays the same.

26. A The dot moves one corner clockwise each time (top-left, top-right, bottom-right), so next it reaches the bottom-left corner: option A.
27. A The arrow rotates a quarter turn clockwise each step: up, right, down. The next position is left: option A.
28. A One circle is added each time (1, 2, 3), so the next figure has 4 circles: option A. Option D has the right count but the wrong shape.
29. A The shading alternates filled, empty, filled, so next is an empty square: option A.
30. A The triangle shrinks each time, so the next is a smaller triangle again: option A. Watch for traps that change shape or shading instead of size.
31. A Options B, C and D are all filled circles (size does not matter); option A is the only empty one.
32. A B, C and D all have four sides (C is simply a rotated square); the triangle has three sides.
33. A B, C and D all point right (differing only in size or shading); option A points left. Direction is the rule.
34. A B, C and D are all large pentagons (one is rotated); option A is much smaller. Size is the rule here.
35. A B, C and D each contain a dot; option A is the only figure without one. The outer shape is a distraction.
36. A Option A is the L-shape turned a quarter turn. Options B and D are mirror images (flips), which are not rotations. Trace the short arm with your finger to check.
37. A Option A is the flag rotated half a turn. B and C are reflections: the flag flies off the wrong side of the pole.
38. A Option A is the same tilted L turned a further quarter turn. The mirrored versions can never be reached by turning alone.
39. A Option A is the flag turned half a turn from the prompt. Check the side of the pole the flag sits on: reflections swap it.

40. A Option A is the same arrow turned half a turn. Option C changes the shading, which rotation never does.
41. A Across each row the shape stays the same; down each column the shading stays the same. Row two is squares, column two is filled, so the answer is a filled square.
42. A Row two is triangles; column two is filled. The missing figure is a filled triangle.
43. A Row two is circles; column two is large. The missing figure is a large circle.
44. A Row two is triangles; column two has a double outline. The answer is a double-outlined triangle.
45. A Row two is squares; column two contains a dot. The answer is a square with a dot.
46. A The rule from the first pair is 'the same shape, made small'. Applied to the square: a small empty square, option A.
47. A The rule is 'same shape, now filled in'. Applied to the pentagon: a filled pentagon, option A.
48. A The rule is 'turn half a turn' (up becomes down). A left arrow turned half a turn points right: option A.
49. A The rule is 'remove the dot'. The triangle without its dot is option A.
50. A The rule is 'double the number of shapes'. One square becomes two squares: option A.

Section C: English

Comprehension answers live in the passage: find the line, then choose. For vocabulary, read the sentence around the word.

51. A The opening sentence states 'exactly one hundred and four days'. Literal questions are answered by finding the exact line, not from memory.
52. A The passage says Grandfather's boots came down 'all eighty-two steps of it'.
53. A The passage says 'At six o'clock her grandfather's boots thudded down the spiral staircase.'
54. A The passage says the sea 'was the colour of old iron'. Note the wind, not the sea, is compared to something hungry.
55. A The passage says he spoke 'calmly, the way other people might mention rain'.
56. A This is an inference: taking the lamp down early and polishing it 'until it shone' shows careful preparation before the storm arrives.
57. A He has just explained that ships 'trust us without ever meeting us'; the bargain is the unspoken deal between keepers and sailors.
58. A A gale is a very strong wind, so 'storms' is the closest meaning. Use the surrounding words 'fog' and 'not even when' to sense the meaning.
59. A Comparing one thing to another using 'like' or 'as' is a simile.
60. A The final line says she understood it was 'a promise, lit fresh every single evening'.
61. A Reluctant means not wanting to do something, so 'unwilling' is closest.
62. A Fragile means easily broken, so 'delicate' is closest.
63. A Vacant means unoccupied, so 'empty' is closest.
64. A Rapid means fast, so 'quick' is closest. 'Sudden' describes timing, not speed.

65. A Drowsy means half-asleep, so 'sleepy' is closest.
66. A Expand means to get bigger; contract means to get smaller.
67. A The opposite of winning is defeat. A 'draw' is neither victory nor defeat.
68. A Generous means giving freely; mean (in the sense of ungenerous) is its opposite.
69. A Conceal means to hide; reveal means to show.
70. A Rough describes an uneven surface; smooth is its direct opposite. 'Gentle' is the opposite of rough behaviour, but for surfaces smooth is best.
71. A 'Its' (no apostrophe) shows belonging. 'It's' always means 'it is', which would not make sense here.
72. A 'Their' shows belonging. 'There' is a place and 'they're' means 'they are'.
73. A Speech marks wrap the spoken words, and a comma sits inside the closing speech mark before 'said Mum'.
74. A Words ending in a consonant plus y change to -ies. An apostrophe never makes a plural.
75. A A comma follows the opening (subordinate) clause 'After the storm passed', separating it from the main clause.

Section D: Mathematics

READ · EXTRACT · SOLVE · CHECK. Watch how the two-step worded problems are broken into small, calm pieces.

76. A Line up the columns: $4,706 + 2,589 = 7,295$. Check by rounding: $4,700 + 2,600 = 7,300$, which is close, so 7,295 is sensible.
77. A Exchange carefully across the zeros: $8,003 - 4,657 = 3,346$. Check by adding back: $3,346 + 4,657 = 8,003$.
78. A Partition: $(70 \times 8) + (6 \times 8) = 560 + 48 = 608$.
79. A Short division: 9 divided by 6 is 1 remainder 3; 33 divided by 6 is 5 remainder 3; 36 divided by 6 is 6. Answer 156. Check: $156 \times 6 = 936$.
80. A Look at the hundreds digit (5): 5 or more rounds up, so 47,562 rounds to 48,000.
81. A Find one quarter first: $96 \div 4 = 24$. Then three quarters = $24 \times 3 = 72$.
82. A Make the denominators the same: $2/5 = 4/10$. Then $4/10 + 1/10 = 5/10 = 1/2$. Always simplify at the end.
83. A Multiplying by 100 moves every digit two places to the left: 0.7 becomes 70.
84. A 25% is one quarter, so divide by 4: $320 \div 4 = 80$.
85. A Line up the decimal points: $1.45 + 2.80 = 4.25$. Writing 2.8 as 2.80 prevents column mistakes.
86. A The rule is 'add 5' each time, so $22 + 5 = 27$. State the rule before jumping to the answer.
87. A Use the inverse: $344 \div 8 = 43$. Check: $8 \times 43 = 344$.
88. A Perimeter is the distance all the way round: $2 \times (9 + 4) = 2 \times 13 = 26$ cm.
89. A Area of a rectangle = length $\times$ width = $12 \times 7 = 84$ square centimetres.
90. A Angles on a straight line add to 180 degrees: $180 - 74 = 106$ degrees.

- 91. A** There are 1,000 metres in a kilometre: $3.6 \times 1,000 = 3,600$ m.
- 92. A** Jump in friendly steps: $14:45 + 1 \text{ hour} = 15:45$; $+ 15 \text{ minutes} = 16:00$; $+ 35 \text{ minutes} = 16:35$.
- 93. A** READ: we need the change from 5 pounds. EXTRACT: 3 notebooks at 1.35. SOLVE: $3 \times 1.35 = 4.05$; $5.00 - 4.05 = 0.95$. CHECK: $4.05 + 0.95 = 5.00$. Answer: 95p.
- 94. A** READ: two steps, a multiply then a subtract. EXTRACT: 24 per box, 15 boxes, 47 given out. SOLVE: $24 \times 15 = 360$; $360 - 47 = 313$. CHECK: $313 + 47 = 360$. Answer: 313.
- 95. A** READ: two people, one total. EXTRACT: sister = 1 part, Tom = 3 parts, so 4 equal parts make 36. SOLVE: 36 divided by 4 = 9. CHECK: sister 9 + Tom 27 = 36. Drawing a bar model makes this visible.
- 96. A** Bridge through the hour: 09:52 to 10:00 is 8 minutes; 10:00 to 11:00 is 1 hour; 11:00 to 11:27 is 27 minutes. Total: 1 hour 35 minutes.
- 97. A** Find the amount for 1 person first: 300 divided by 4 = 75 g. Then for 10 people: $75 \times 10 = 750$ g. This 'unitary method' works for every scaling question.
- 98. A** Add them all: $12 + 15 + 9 + 8 = 44$. Divide by how many numbers there are: 44 divided by 4 = 11.
- 99. A** Work backwards, undoing each step: $13 + 7 = 20$, then $20 \times 2 = 40$. CHECK forwards: half of 40 is 20; $20 - 7 = 13$.
- 100. A** Total counters: $3 + 5 + 2 = 10$. Blue: 5. Probability = $5/10 = 1/2$. Always simplify the fraction.