

Free Spatial Reasoning Test

10 questions with a worked solution for every one

This is a full-length practice test. Each question shows a figure to work with in your head: a shape to turn or reflect, a net to fold, a stack of cubes to count or a solid to rotate. Give yourself 10 minutes and work without checking the answers as you go. Every question has exactly one correct answer.

The worked solutions start after the last question. They show how to see each answer and explain every wrong option, so a question you get wrong tells you something.

Questions	10
Suggested time limit	10 minutes
Format	Multiple choice, four options
Answers	Included, with full worked solutions

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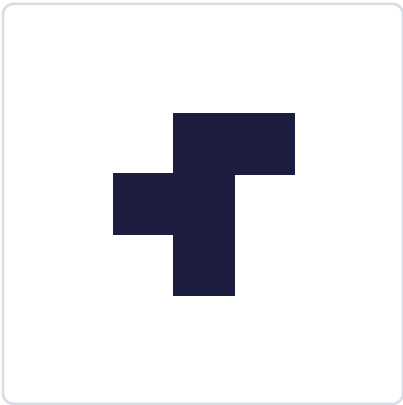
Free, no sign-up required.

Written by Guy Thornton. Updated 25 September 2026.

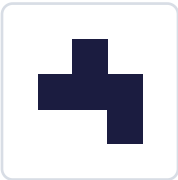
Questions

QUESTION 1 OF 10

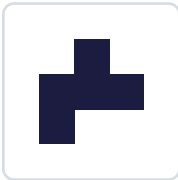
Which option is the same shape as the one shown, only rotated?



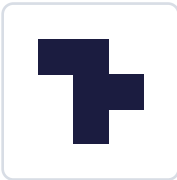
A)



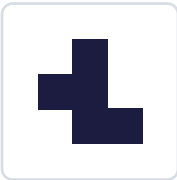
B)



C)



D)

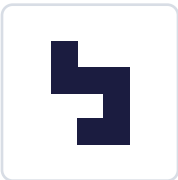


QUESTION 2 OF 10

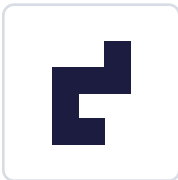
The shape is reflected in the dashed mirror line. Which option shows its reflection?



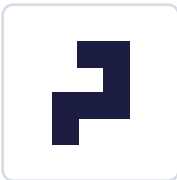
A)



B)



C)

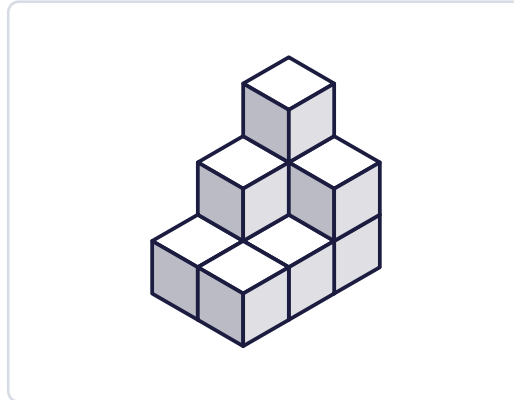


D)



QUESTION 3 OF 10

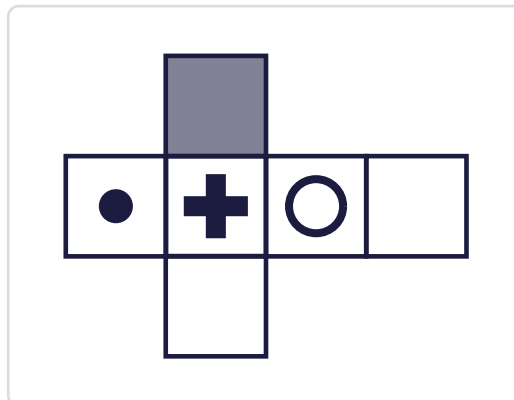
This solid is built from identical cubes joined face to face. What is the smallest number of cubes it could contain?



- A) 6
- B) 7
- C) 10
- D) 12

QUESTION 4 OF 10

The net is folded into a cube with the markings on the outside. Which cube could it make?



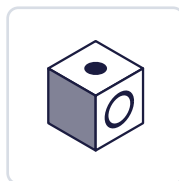
A)



B)



C)

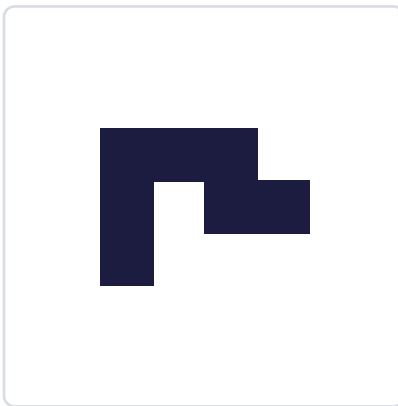


D)



QUESTION 5 OF 10

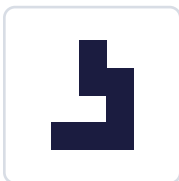
Three of the options are the shape shown, rotated. Which one is not?



A)



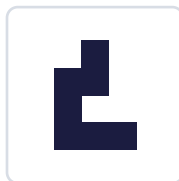
B)



C)

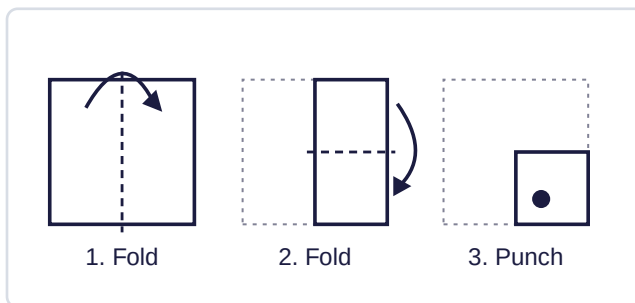


D)

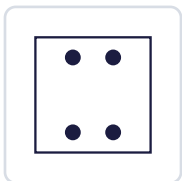


QUESTION 6 OF 10

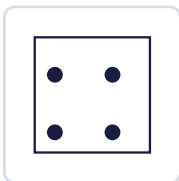
A square of paper is folded twice as shown, then a hole is punched through every layer. Which option shows the paper when it is unfolded?



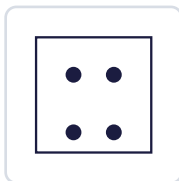
A)



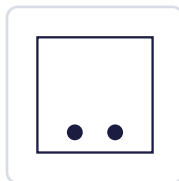
B)



C)

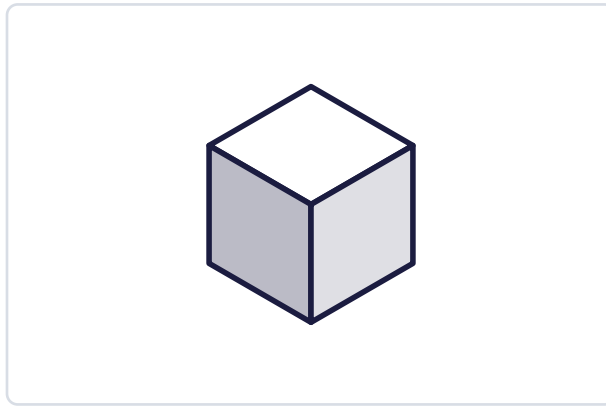


D)

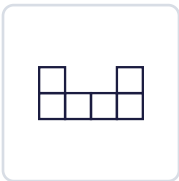


QUESTION 7 OF 10

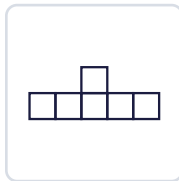
Which of these nets can be folded to make a cube?



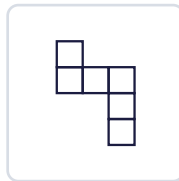
A)



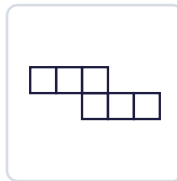
B)



C)

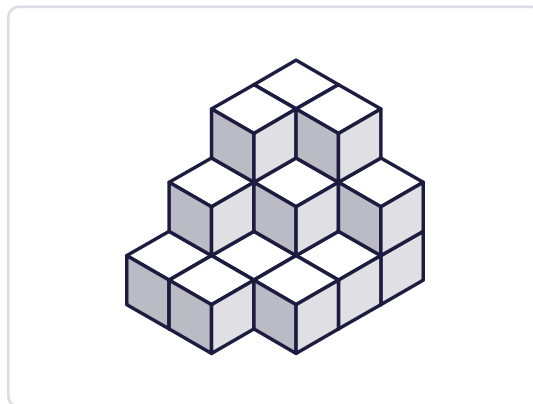


D)



QUESTION 8 OF 10

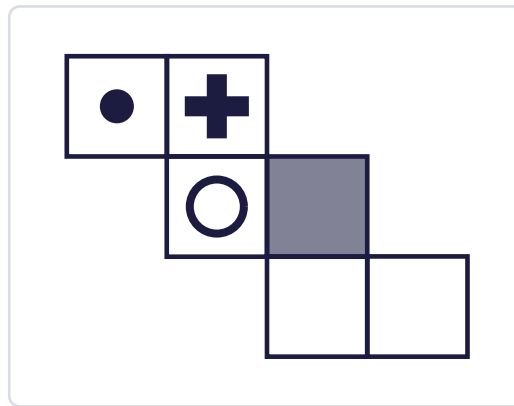
This solid is built from identical cubes joined face to face, using the smallest number that could make it. How many of those cubes cannot be seen?



- A) 8
- B) 9
- C) 12
- D) 20

QUESTION 9 OF 10

The net is folded into a cube with the markings on the outside. Which cube could it make?



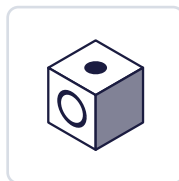
A)



B)



C)

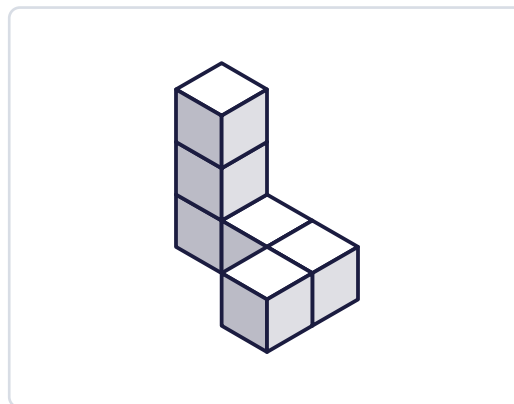


D)

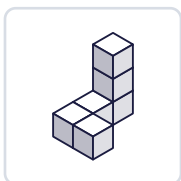


QUESTION 10 OF 10

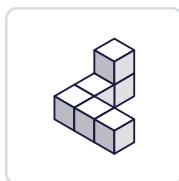
Which option is the solid shown, turned to a new position?



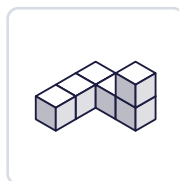
A)



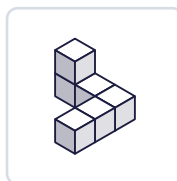
B)



C)



D)



Answers and worked solutions

Every wrong option is explained too, not just the correct answer.

Question 1

Correct answer: A



The answer is A. The shape is a column of three squares with one extra square on each side: on the left it sits beside the middle of the column, on the right it sits beside the top. Give the shape a quarter turn clockwise and the column lies flat, the middle square points up and the end square points down, which is A. B is the shape flipped over and then turned, so no amount of turning reaches it. C is the shape flipped left to right, and D is the shape flipped top to bottom: both are mirror images.

Question 2

Correct answer: C



The answer is C. A vertical mirror swaps left and right but leaves top and bottom where they are. In the shape, the short arm at the top points right and the tail at the bottom hangs down on the right. In the reflection the top arm points left and the tail hangs down on the left, which is C. A is the shape turned upside down (a half turn). B is a reflection in a horizontal line, which swaps top and bottom instead. D is the shape unchanged.

Question 3

Correct answer: C) 10

The answer is 10. A cube can only rest on the floor or on another cube, and these are joined, so every top you can see stands on a full column, even where the lower cubes are hidden. Count the columns by their tops: one column is 3 cubes high, two are 2 high and three are 1 high, so $3 + 2 + 2 + 1 + 1 + 1 = 10$. 7 is the number of cubes you can see at least part of; it leaves out the 3 cubes hidden at the back, under the taller columns. 6 counts only the tops, one cube per column. 12 adds cubes that nothing in the picture needs.

Question 4

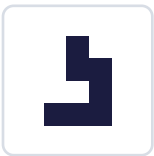
Correct answer: D



The answer is D. In the row of four, squares two apart end up opposite each other, so the dot is opposite the ring and the cross is opposite the blank square at the end of the row. The shaded square is opposite the blank square below the cross. Stand the cube with the shaded face on top and the cross facing you on the left: the ring folds round to meet it on the right, which is D. A and C both show the dot and the ring side by side, but those two are opposite, so they are never seen together. B has the right three faces with the cross and the ring swapped: that is the mirror image of the real cube, and no amount of turning produces it.

Question 5

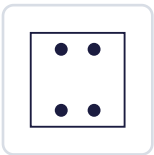
Correct answer: B



The answer is B. A quick way to check each option: start at the single square on the end of the short arm, walk along the shape to the other end, and note which way you turn at each corner. In the shape shown the walk turns right, then left, then left. Turning a shape never changes its turns, so A, C and D all give right, left, left: they are the shape given a quarter turn clockwise, a half turn and a quarter turn anticlockwise. In B the same walk turns left, right, right, which only flipping the shape over can do. B is a mirror image.

Question 6

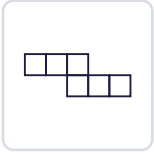
Correct answer: A



The answer is A. The paper is four layers thick when it is punched, so there are four holes. Undo the folds one at a time. Unfolding the top half reflects the hole in the horizontal fold line, so a second hole appears above it, the same distance from the line. Unfolding the left half reflects both holes in the vertical fold line. Every hole mirrors its neighbour across a fold, so all four sit close to the vertical centre line and close to the top and bottom edges. B copies the hole into the same spot in every quarter, which slides the paper instead of unfolding it. C reflects across the vertical fold but slides across the horizontal one. D undoes only one fold, so it has two holes.

Question 7

Correct answer: D



The answer is D. Fold the top row of three into a U. The bottom row of three wraps round the open sides from the other direction, and the step between the rows lets its last two squares close the cube without overlapping. A is a row of four with both end squares on the same side. The row wraps into a loop that brings its two ends together, so both flaps try to cover the same face and the opposite face stays open. B is five squares in a row, but a loop round a cube has only four sides, so the fifth square lands on top of the first. In C, the square at the left end of the row and the square at the bottom of the column fold onto the same face, which leaves another face open.

Question 8

Correct answer: A) 8

The answer is 8. First find the smallest number of cubes. A cube can only rest on the floor or on another cube, and the cubes are joined, so each top you can see stands on a full column. Three columns are 3 cubes high, three are 2 high and five are 1 high: $9 + 6 + 5 = 20$ cubes. Now count the cubes you can see at least part of: 12. The rest, $20 - 12 = 8$, are buried behind and beneath others. 20 is the total, not the hidden number, and 12 is the number you can see. 9 counts every cube that is not a top as hidden, but many of those show their sides at the front of the solid.

Question 9

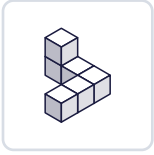
Correct answer: B



The answer is B. Fold the net round the ring. With the ring facing you, the cross above it folds back to become the top, the shaded square beside it folds back to become the right side, and the dot, joined to the cross, folds down to become the left side. The two blank squares close the bottom and the back, so the dot is opposite the shaded face. Now look at the corner where the cross, the shaded face and the ring meet: going clockwise round it, seen from outside, the order is cross, shaded, ring. B reads ring, cross, shaded clockwise from the top, which is the same cycle, so it is that corner turned round. A puts the dot, cross and ring in the wrong order: on the real cube they run dot, cross, ring clockwise, and A runs dot, ring, cross, the mirror image. C shows the dot beside the shaded face, but they are opposite. D runs shaded, blank, cross clockwise, where the real cube runs shaded, cross, blank: another mirror image.

Question 10

Correct answer: D



The answer is D. The solid is a chain of three straight arms, each at right angles to the last: a short arm of two cubes, then an arm of three, then another arm of three. Every option is built the same way, so what decides it is the direction of the last arm. Picture the short arm pointing straight up and walk from it along the middle arm: on the solid shown, the last arm turns off to your right. Stand D with its short arm up in the same way and its last arm turns right too. In A, B and C the last arm turns to the left, so they are mirror images of the solid: each looks convincing, but no amount of turning makes it match.

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