CAT4TESTS

FREE SAMPLE QUESTIONS · YEAR 5

CAT4 Level B Practice Test

16 original questions covering all four CAT4 reasoning areas, with clear step-by-step solutions for parents and children.

- Non-Verbal Reasoning
- Verbal Reasoning
- Quantitative Reasoning
- Spatial Ability

16 questions • **4** reasoning areas • **Full** worked solutions



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INTRODUCTION

Welcome to your free CAT4 Level B sample

This sample gives your child a first look at the four kinds of thinking tested in CAT4 Level B (Year 5). There are two questions for each question type, every question comes with simple steps to follow, and every answer is explained.

HOW TO USE THIS SAMPLE

1. **Try first**
   Let your child try each question on their own, without help.
2. **Use the steps**
   If they get stuck, read the 'How to solve' steps together.
3. **Check & talk**
   Mark the answers on the solution pages and talk through each one.

THE FOUR CAT4 REASONING AREAS

Non-Verbal Reasoning
Thinking with shapes

Finding rules in shapes and patterns, without using words.

Q1–4 Shape groups · Shape grids

Verbal Reasoning
Thinking with words

Spotting how words are grouped and linked by meaning.

Q5–8 Word groups · Word links

Quantitative Reasoning
Thinking with numbers

Finding the rule behind number patterns and pairs.

Q9–12 Number patterns · Number pairs

Spatial Ability
Thinking in pictures

Picturing shapes in the mind: hiding, folding and turning them.

Q13–16 Hidden shapes · Paper folding

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NON-VERBAL REASONING

Shape Groups

CAT4 question type: **Figure Classification**

HOW TO SOLVE

1. Look closely at all three pictures in the group.
2. Check the shape, the number of sides, the shading and how the parts fit together.
3. Find the rule that is true for **every** picture in the group.
4. Choose the answer that follows the whole rule.

MEMORY TRICK

Look → Find the rule → Check every part

Question 1 These three shapes are alike in some way. Which shape below goes with them?

THE GROUP



CHOOSE YOUR ANSWER



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NON-VERBAL REASONING

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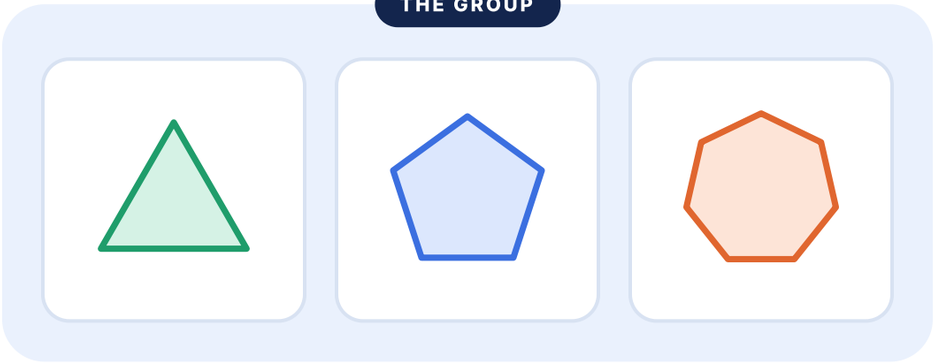
MEMORY TRICK

Look → Find the rule → Check every part

Question 2

These three shapes are alike in some way. Which shape below goes with them?

THE GROUP



CHOOSE YOUR ANSWER



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NON-VERBAL REASONING

Shape Grids

CAT4 question type: **Figure Matrices**

HOW TO SOLVE

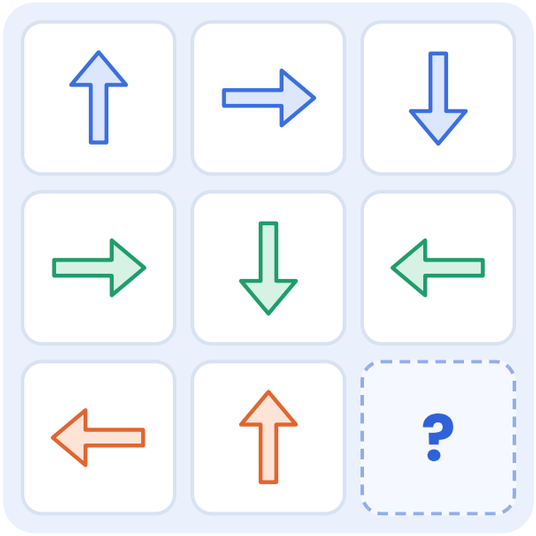
1. Look across each row. What stays the same?
2. Look from box to box. What changes: the number, the turn or the position?
3. Use **both** rules together to work out the missing box.
4. Check the shape, the colour and the direction before you choose.

MEMORY TRICK

Rows → Columns → Combine

Question 3

Look across the rows and down the columns. Which picture belongs in the empty box?



CHOOSE YOUR ANSWER



A B C D E

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NON-VERBAL REASONING

Shape Grids

CAT4 question type: **Figure Matrices**

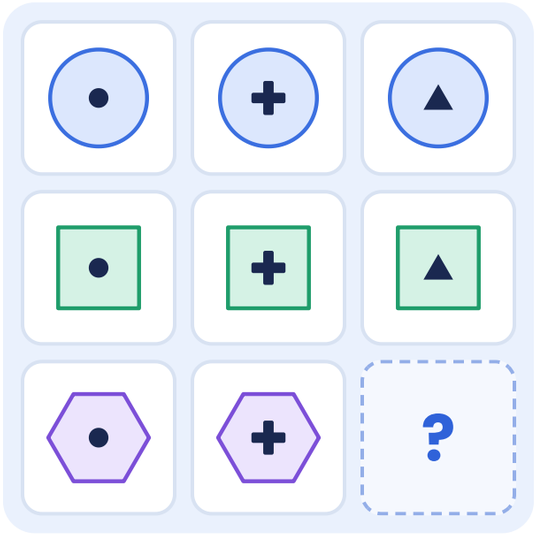
HOW TO SOLVE

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4. Check the shape, the colour and the direction before you choose.

MEMORY TRICK

Rows → Columns → Combine

Question 4 Look across the rows and down the columns. Which picture belongs in the empty box?



CHOOSE YOUR ANSWER



A B C D E

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VERBAL REASONING

Word Groups

CAT4 question type: **Verbal Classification**

HOW TO SOLVE

1. Read the three words carefully.
2. Ask: what **kind of thing** is each one?
3. Name the exact group they all belong to.
4. Rule out words that are only a part of, or linked to, the group.

MEMORY TRICK

Read → Name the group → Find the match

Question 5

These three words go together. Which word below belongs with them?

oak **birch** **willow**

CHOOSE YOUR ANSWER

A	B	C	D	E
acorn	maple	leaf	forest	branch

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VERBAL REASONING

Word Groups

CAT4 question type: **Verbal Classification**

HOW TO SOLVE

1. Read the three words carefully.
2. Ask: what **kind of thing** is each one?
3. Name the exact group they all belong to.
4. Rule out words that are only a part of, or linked to, the group.

MEMORY TRICK

Read → Name the group → Find the match

Question 6

These three words go together. Which word below belongs with them?

joy **anger** **fear**

CHOOSE YOUR ANSWER

A	B	C	D	E
smile	tears	shout	sadness	heart

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VERBAL REASONING

Word Links

CAT4 question type: **Verbal Analogies**

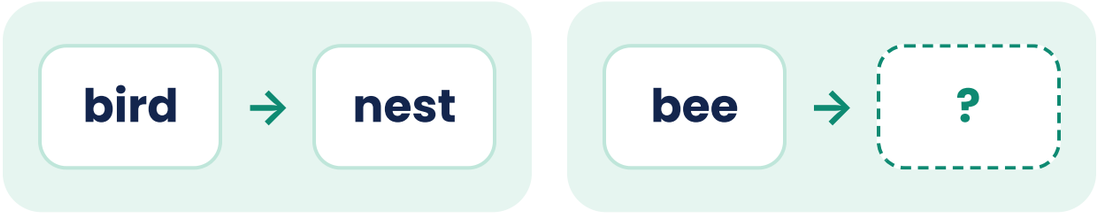
HOW TO SOLVE

1. Look at the first pair of words.
2. Make a short sentence that links them, e.g. “A cow lives on a farm.”
3. Use the **same** sentence with the next word.
4. Choose the word that completes the sentence.

MEMORY TRICK

Link → Sentence → Swap

Question 7 **bird** goes with **nest**. Which word goes with **bee** in the same way?



CHOOSE YOUR ANSWER

A	B	C	D	E
honey	flower	hive	wasp	sting

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VERBAL REASONING

Word Links

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HOW TO SOLVE

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2. Make a short sentence that links them, e.g. “A cow lives on a farm.”
3. Use the **same** sentence with the next word.
4. Choose the word that completes the sentence.

MEMORY TRICK

Link → Sentence → Swap

Question 8 **shallow** goes with **deep**. Which word goes with **narrow** in the same way?



CHOOSE YOUR ANSWER

A	B	C	D	E
wide	thin	long	small	tall

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QUANTITATIVE REASONING

Number Patterns

CAT4 question type: **Number Series**

HOW TO SOLVE

1. Write down the jump between each pair of numbers.
2. Look at the jumps: do they stay the same, grow or repeat?
3. If the numbers go up and down a lot, try every other number.
4. Continue the pattern to find the missing number.

MEMORY TRICK

Jumps → Pattern → Next number

Question 9 Look at the number pattern. Which number comes next?

4	7	6	9	8	11	?

CHOOSE YOUR ANSWER

A	B	C	D	E
9	12	14	13	10

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QUANTITATIVE REASONING

Number Patterns

CAT4 question type: **Number Series**

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3. If the numbers go up and down a lot, try every other number.
4. Continue the pattern to find the missing number.

MEMORY TRICK

Jumps → Pattern → Next number

Question 10 Look at the number pattern. Which number comes next?

2	20	4	18	6	16	?

CHOOSE YOUR ANSWER

A	B	C	D	E
14	8	10	12	7

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QUANTITATIVE REASONING

Number Pairs

CAT4 question type: **Number Analogies**

HOW TO SOLVE

1. Look at the first pair. How does the first number become the second?
2. Think of more than one rule: add, take away, times or divide.
3. Test each rule on the second pair. It must work for **both**.
4. Use the rule on the last number.

MEMORY TRICK

Find the rule → Test the rule → Use the rule

Question 11 Each pair of numbers follows the same rule. Which number is missing?



CHOOSE YOUR ANSWER

A	B	C	D	E
24	21	36	48	30

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QUANTITATIVE REASONING

Number Pairs

CAT4 question type: **Number Analogies**

HOW TO SOLVE

1. Look at the first pair. How does the first number become the second?
2. Think of more than one rule: add, take away, times or divide.
3. Test each rule on the second pair. It must work for **both**.
4. Use the rule on the last number.

MEMORY TRICK

Find the rule → Test the rule → Use the rule

Question 12 Each pair of numbers follows the same rule. Which number is missing?



CHOOSE YOUR ANSWER

A	B	C	D	E
37	23	24	25	19

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SPATIAL ABILITY

Hidden Shapes

CAT4 question type: **Figure Recognition**

HOW TO SOLVE

1. Study the target shape: its size, its corners and which way it points.
2. Look for the same outline hidden inside each design. Ignore the extra lines and curves.
3. Reject shapes that are bigger, smaller, turned, flipped or stretched.
4. Choose the design that hides an **exact** copy.

MEMORY TRICK

Size → Direction → Exact match

Question 13 Look at the target shape. Which design has this exact shape hidden in it?

TARGET SHAPE

CHOOSE YOUR ANSWER



A



B



C



D



E

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SPATIAL ABILITY

Hidden Shapes

CAT4 question type: **Figure Recognition**

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MEMORY TRICK

Size → Direction → Exact match

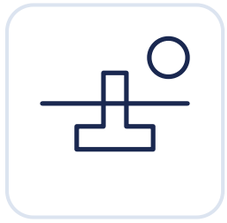
Question 14

Look at the target shape. Which design has this exact shape hidden in it?

TARGET SHAPE



CHOOSE YOUR ANSWER



A



B



C



D



E

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SPATIAL ABILITY

Paper Folding

CAT4 question type: **Figure Analysis**

HOW TO SOLVE

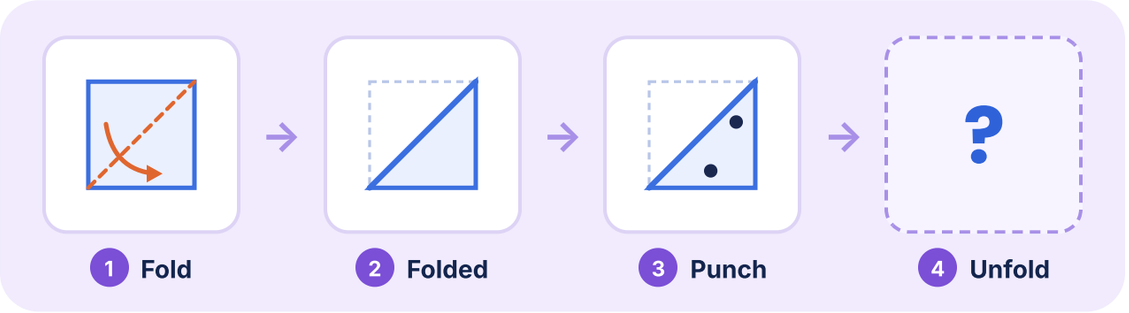
1. Follow each fold in order. Where is the fold line?
2. Count the layers: every layer gets a hole when you punch.
3. Unfold one step at a time, mirroring each hole across that fold line.
4. Check how close each hole is to each fold line.

MEMORY TRICK

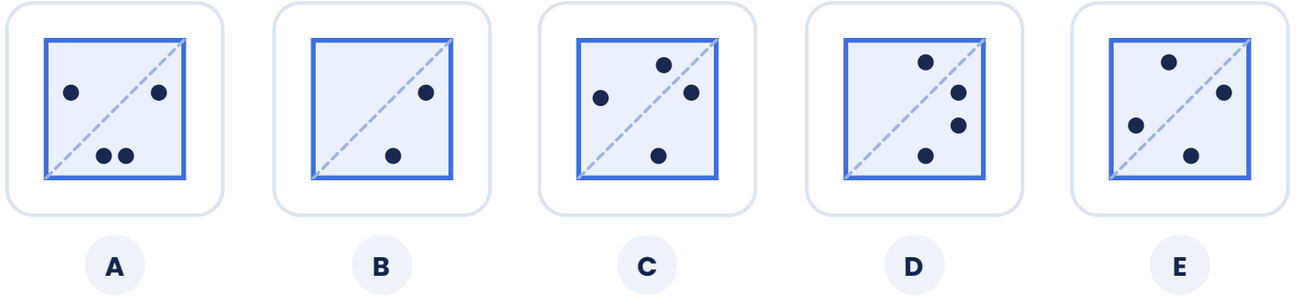
Fold → Count layers → Unfold step by step

Question 15

A square of paper is folded once along the diagonal, then two holes are punched through it. What does it look like when it is opened?



CHOOSE YOUR ANSWER



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SPATIAL ABILITY

Paper Folding

CAT4 question type: **Figure Analysis**

HOW TO SOLVE

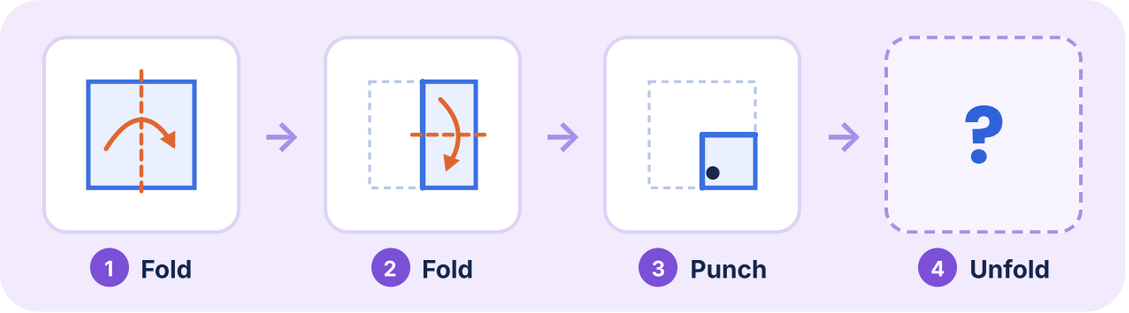
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MEMORY TRICK

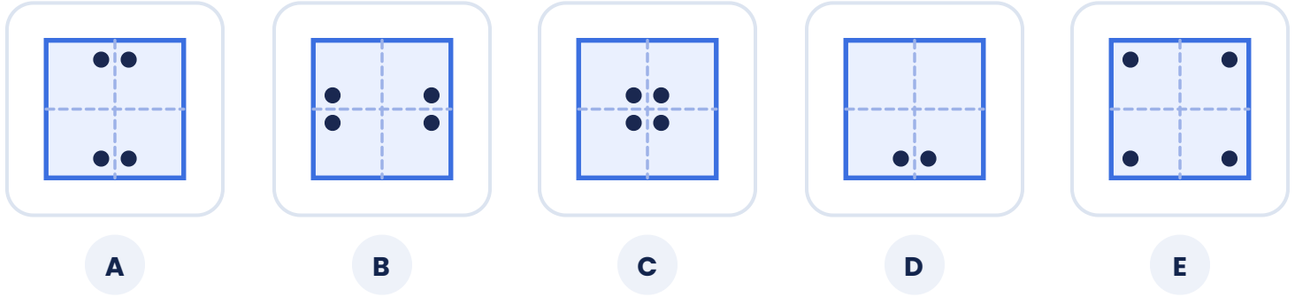
Fold → Count layers → Unfold step by step

Question 16

A square of paper is folded twice, then one hole is punched through it. What does it look like when it is opened?



CHOOSE YOUR ANSWER



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SOLUTIONS & EXPLANATIONS

Questions 1 & 2 Non-Verbal Reasoning

Question 1 SHAPE GROUPS

Answer D

Rule: the small shape inside matches the big shape



A: circle square | B: pentagon hexagon | C: square triangle | **D: pentagon pentagon** | E: triangle circle

1. Look at each picture in the group: a circle inside a circle, a triangle inside a triangle and a square inside a square.
2. So the rule is: **the small inside shape is the same as the big outside shape**. Colour does not matter.
3. A has a square in a circle, B a hexagon in a pentagon, C a triangle in a square and E a circle in a triangle.
4. Only **D** (a pentagon inside a pentagon) follows the rule.

KEY IDEA Look at how the parts of a picture are linked, not just what each part is.

Question 2 SHAPE GROUPS

Answer C

Rule: every shape has an odd number of sides (3, 5, 7)



A: 4 sides | B: 6 sides | **C: 5 sides** | D: 8 sides | E: no sides

1. Count the sides: the triangle has 3, the pentagon has 5 and the heptagon has 7.
2. 3, 5 and 7 are all **odd numbers**, so the rule is: the shape has an odd number of sides.
3. A has 4 sides, B has 6 and D has 8 (all even). E is a circle with no straight sides.
4. C looks different (like a house), but it has 5 sides. Answer: **C**.

KEY IDEA A shape can look different from the group. If its count fits the rule, it belongs.

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SOLUTIONS & EXPLANATIONS

Questions 3 & 4 Non-Verbal Reasoning

Question 3 SHAPE GRIDS

Answer B

Rows: same colour · each box turns a quarter turn clockwise



left → up → right = B

1. In each row the arrow keeps the **same colour**: blue, then green, then orange.
2. From left to right the arrow turns **a quarter turn clockwise** each time: up, right, down in the first row.
3. In the last row the arrow points left, then up, so next it must point **right**.
4. A, C and D point the wrong way. E points right but is blue, not orange. Answer: **B**.

KEY IDEA In a grid, check two things: what changes, and what stays the same.

Question 4 SHAPE GRIDS

Answer E

Rows: outside shape · Columns: inside shape



E is the only hexagon with a triangle pointing up

1. Across each row the **outside shape** stays the same: circles, then squares, then hexagons.
2. Down each column the **inside shape** stays the same: a dot, then a cross, then a triangle.
3. The empty box is in the hexagon row and the triangle column, so it needs a triangle inside a hexagon, pointing up.
4. A has a dot, B is a square, C's triangle points down and D has a cross. Answer: **E**.

KEY IDEA Use the row rule and the column rule together. One rule alone is not enough.

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SOLUTIONS & EXPLANATIONS

Questions 5 & 6 Verbal Reasoning

Question 5 WORD GROUPS

Answer B

Oak, birch and willow are all types of tree

acorn	maple	leaf	forest	branch
✗ seed	✓ tree	✗ part	✗ many trees	✗ part

1. Oak, birch and willow are all **types of tree**.
2. A leaf and a branch are **parts** of a tree, and an acorn is the seed of an oak tree.
3. A forest is a place with many trees. It is not one type of tree.
4. A maple is a type of tree. Answer: **B**.

KEY IDEA Be exact: a *type of* something is different from a *part of* it.

Question 6 WORD GROUPS

Answer D

Joy, anger and fear are all feelings

smile	tears	shout	sadness	heart
✗ action	✗ from eyes	✗ action	✓ feeling	✗ body

1. Joy, anger and fear are all **feelings** (emotions) that happen inside us.
2. A smile and a shout are things we **do** when we feel something.
3. Tears come from our eyes, and the heart is a part of the body.
4. Sadness is a feeling. Answer: **D**.

KEY IDEA Some words are linked to the group but are actions. Choose the same kind of thing.

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SOLUTIONS & EXPLANATIONS

Questions 7 & 8 Verbal Reasoning

Question 7 WORD LINKS

Answer C

Link: "lives in a"

bird	lives in a	nest
bee	lives in a	hive

1. Make a sentence for the first pair: "A bird **lives in a** nest."
2. Use the same sentence for bee: "A bee lives in a ___."
3. Bees make honey and visit flowers, a wasp is a different insect, and a sting is part of a bee.
4. A bee lives in a hive. Answer: **C**.

KEY IDEA Words that just go with "bee" are not enough. The answer must fit the same sentence.

Question 8 WORD LINKS

Answer A

Link: "is the opposite of"

shallow	is the opposite of	deep
narrow	is the opposite of	wide

1. Shallow and deep are **opposites**: they describe how far down something goes.
2. So we need the word that is the opposite of narrow.
3. Thin means nearly the same as narrow, and long, small and tall describe other sizes.
4. The opposite of narrow is wide. Answer: **A**.

KEY IDEA For opposites, check the answer describes the same thing (here, how wide something is).

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SOLUTIONS & EXPLANATIONS

Questions 9 & 10 Quantitative Reasoning

Question 9 NUMBER PATTERNS

Answer E

Rule: the jumps repeat +3, −1



1. Write the jumps: 4 → 7 is +3, 7 → 6 is −1, 6 → 9 is +3, 9 → 8 is −1.
2. The jumps **repeat**: +3, then −1, again and again.
3. The last jump was 8 → 11 (+3), so the next jump is −1: 11 − 1 = **10**.
4. Answer: **E**. (14 is a trap: it adds 3 again.)

KEY IDEA If the numbers go up and down, look for a repeating pair of jumps.

Question 10 NUMBER PATTERNS

Answer B

Two patterns take turns



2, 4, 6, ... go up by 2 · 20, 18, 16 go down by 2

1. The jumps (+18, −16, +14 ...) are hard to use, so look at **every other number**.
2. The 1st, 3rd and 5th numbers are 2, 4, 6. They go **up by 2**.
3. The 2nd, 4th and 6th numbers are 20, 18, 16. They go **down by 2**.
4. The missing number is 7th, so it follows the first pattern: 6 + 2 = 8. Answer: **B**. (14 is a trap.)

KEY IDEA When a series jumps up and down a lot, split it into two series.

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SOLUTIONS & EXPLANATIONS

Questions 11 & 12 Quantitative Reasoning

Question 11 NUMBER PAIRS

Answer C

Rule: times 3: it works for every pair

6 → 18	9 → 27	12 → 36
×3	×3	×3

Adding 12 does not work: 9 + 12 = 21, not 27.

1. First pair: 6 → 18. This could be “add 12” or “times 3”.
2. Test both on the second pair: 9 + 12 = 21, which does not work, but 9 × 3 = 27, which does.
3. So the rule is **× 3**: 12 × 3 = **36**.
4. Answer: **C**. (24 is a trap: it adds 12 instead.)

KEY IDEA Always test your rule on the second pair before you use it.

Question 12 NUMBER PAIRS

Answer D

Rule: take away 6: it works for every pair

15 → 9	22 → 16	31 → 25
−6	−6	−6

Check: 15 − 6 = 9 and 22 − 6 = 16. Both work.

1. First pair: 15 → 9. The number gets smaller by 6: 15 − 6 = 9.
2. Test it on the second pair: 22 − 6 = 16. It works.
3. Use the rule on the last number: 31 − 6 = **25**.
4. Answer: **D**. (37 is a trap: it adds 6 instead of taking it away.)

KEY IDEA Notice whether the numbers get bigger or smaller. That tells you to add or take away.

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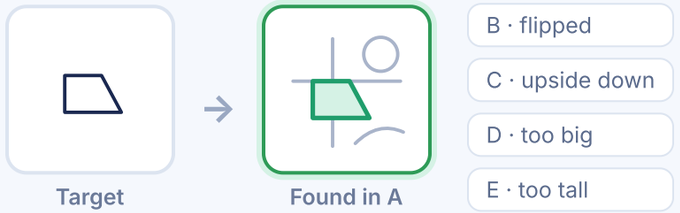
SOLUTIONS & EXPLANATIONS

Questions 13 & 14 Spatial Ability

Question 13 HIDDEN SHAPES

Answer A

Same size · same direction · exact copy



1. The target has a **straight upright left side** and a **slanted right side**; the bottom is longer than the top.
2. In A, the exact same outline is hidden behind a circle, two straight lines and a curve.
3. B is flipped (the slant is on the left), C is upside down, D is too big and E is too tall.
4. Answer: **A**.

KEY IDEA Check which side is straight and which side slants. A flip swaps them over.

Question 14 HIDDEN SHAPES

Answer D

Same size · same direction · exact copy



1. The target is an upright **T shape** with a wide top bar and a thin stem.
2. In D, the same T is hidden behind a square, a circle and a line: same size, same direction.
3. A is upside down, B is turned on its side, C's stem is too thick and E is too small.
4. Answer: **D**.

KEY IDEA Compare the parts of the shape, not just the outline. A thicker stem makes a different shape.

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SOLUTIONS & EXPLANATIONS

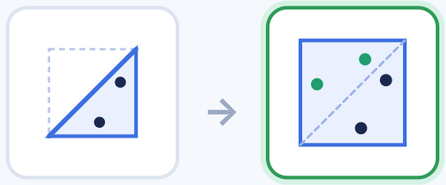
Questions 15 & 16 Spatial Ability

Question 15

PAPER FOLDING

Answer C

Mirror each hole across the diagonal fold



navy = punched holes · **green = mirror copies**

1. The square is folded **along the diagonal**, so there are two layers and each hole becomes two holes.
2. When the paper is opened, each hole is copied to the other side of the diagonal, like a mirror.
3. The hole near the right edge makes a copy near the top edge; the hole near the bottom makes a copy near the left edge.
4. A, D and E mirror across the wrong line, and B has no copies. Answer: **C**.

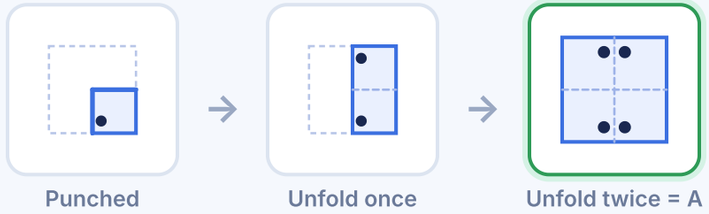
KEY IDEA With a diagonal fold, a side edge swaps with the top or bottom edge when you unfold.

Question 16

PAPER FOLDING

Answer A

Unfold one fold at a time: mirror the holes each time



1. Two folds make **four layers**, so one punch makes **four holes**.
2. Undo the second fold: the hole is mirrored across the flat fold. It was far from that fold, so the two holes are far apart.
3. Undo the first fold: both holes are mirrored across the upright fold. They were close to it, so the copies are close beside them.
4. Four holes: close together left to right, far apart top to bottom. Answer: **A**.

KEY IDEA Unfold in reverse order: the last fold you made is the first one you open.

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