Smart Cub Learning

11+ TOPIC PACK

Shape Analogies

Non-verbal Reasoning

60 questions from warm-up to exam level, with worked solutions

SAMPLE

Smart Cub Learning topic packs are original practice material. We are not affiliated with GL Assessment, CEM, Quest Assessments, Kent County Council or any school.

How to do it

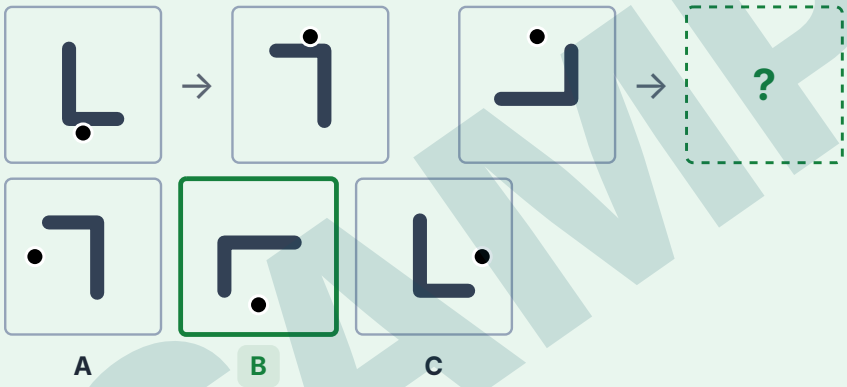
A shape analogy starts with two figures. The first figure changes into the second. You must make the same change to the third figure. In this pack, one thing changes each time.

Learn the method

1. Look at the first two figures. Find what changes. Look for a turn, the number of dots, the shade, or a bead that has moved.
2. Say each change in words, for example ‘a half turn’ or ‘one more dot’ or ‘one shade lighter’.
3. A bead sits on a track. Its level is how high it sits, and level 1 is the lowest. The shades run white, pale grey, mid grey, black.
4. Make exactly that change to the third figure. Keep everything else the same, including its size. The third figure may be a different shape, and that is fine.
5. Check every answer against the change. Cross out each answer that gets it wrong, or changes something else as well.
6. If two answers are left, go back to the first pair and look again at what changed.

Worked example 1

The first figure changes into the second figure. Choose the figure that the third figure changes into in the same way.



How to work it out

1. Look at the corner of the L. It goes from the bottom left to the top right.
2. That is a half turn. The dot makes the same turn, from the bottom to the top.
3. Give the third figure the same turn. Its corner goes from the bottom right to the top left.
4. Its dot goes from the top to the bottom.
5. The answer shows an L with its corner at the top left and its dot at the bottom.

The answer is B.

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★ Top Tip

Cover the answers with your hand while you work out the change. Then you cannot be pulled towards an answer that only looks right.

▲ Watch Out

- A turn can be hard to see. Pick one part of the shape, such as a dot, a corner or a notch, and follow it.
- Do not guess a shade or a level. Name it, then count the steps along the shades or up the track.

Exam Tip

Check each answer against the change, and cross out wrong ones as you go. Do not stare at the picture and hope it looks right.

Watch

Stuck? **Watch a short video** that shows this skill step by step.
smartcublearning.com/go/66430

Explore

Want more practice? **Practise this skill online.**
smartcublearning.com/go/69008

Key words

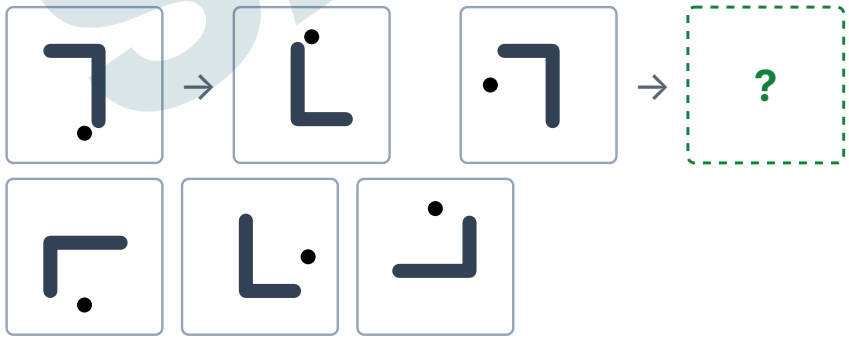
analogy	A pair that shows a change. You must make the same change to a new figure.
clockwise	Turning the way the hands of a clock move.
anticlockwise	Turning the opposite way to the hands of a clock.
half turn	A turn of 180 degrees. The shape ends up upside down.
quarter turn	A turn of 90 degrees, like moving from 12 to 3 on a clock.
shade	How dark a shape is. We use white, pale grey, mid grey and black.
level	How high a bead sits on its track. Level 1 is the lowest.
mirror image	A shape flipped over, as if seen in a mirror. It faces the other way round.

Part 1 Warm up: turns, counts and shading

15 questions. Circle the letter of your answer. Use spare paper for your working.

The first figure changes into the second figure. Choose the figure that the third figure changes into in the same way.

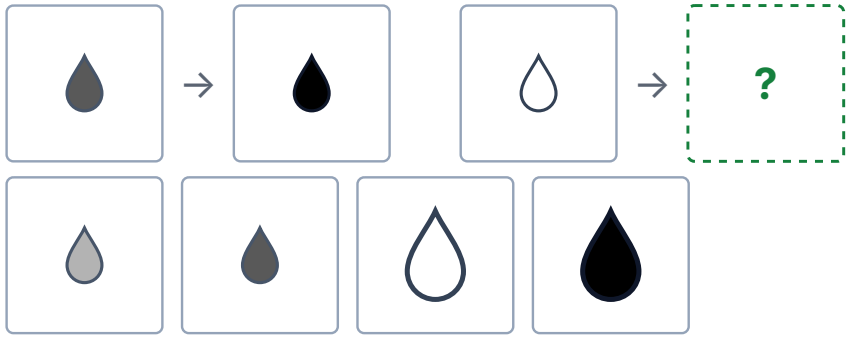
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A B C D

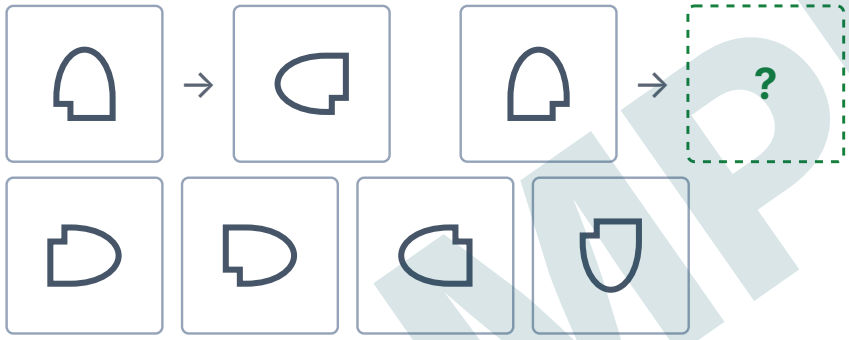
Score: _____ / 15

Part 3 Stretch: turns, counts and shading

15 questions. Circle the letter of your answer. Use spare paper for your working.

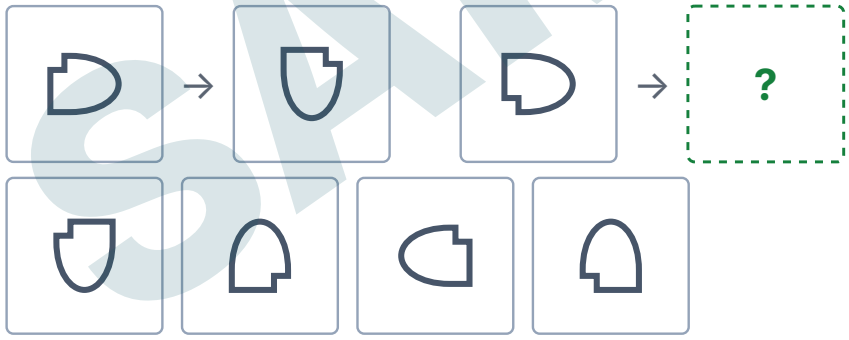
The first figure changes into the second figure. Choose the figure that the third figure changes into in the same way.

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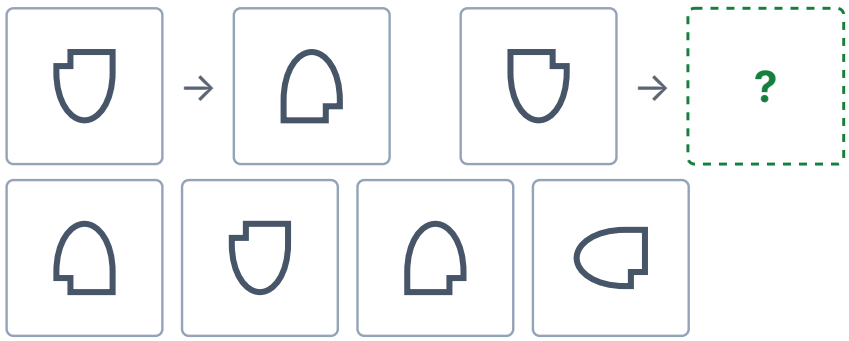
A B C D

32



A B C D

33



A B C D

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