

Max's Pattern Puzzles: Non-Verbal Reasoning Challenge

Learning objective: To develop logical thinking and spatial awareness by identifying patterns, sequences, and relationships in non-verbal shapes.

Max the monkey has been busy creating these geometric puzzles. Look closely at the shapes, rotations, and patterns to find the correct solution for each question.

Word bank: Rotation · Symmetry · Sequence · Reflection · Pattern · Geometric

1. Max has a sequence of shapes. Shape 1 is a triangle pointing up. Shape 2 is a triangle pointing right. Shape 3 is a triangle pointing down. Based on this 90-degree clockwise rotation, draw what Shape 4 should look like. (2 marks)

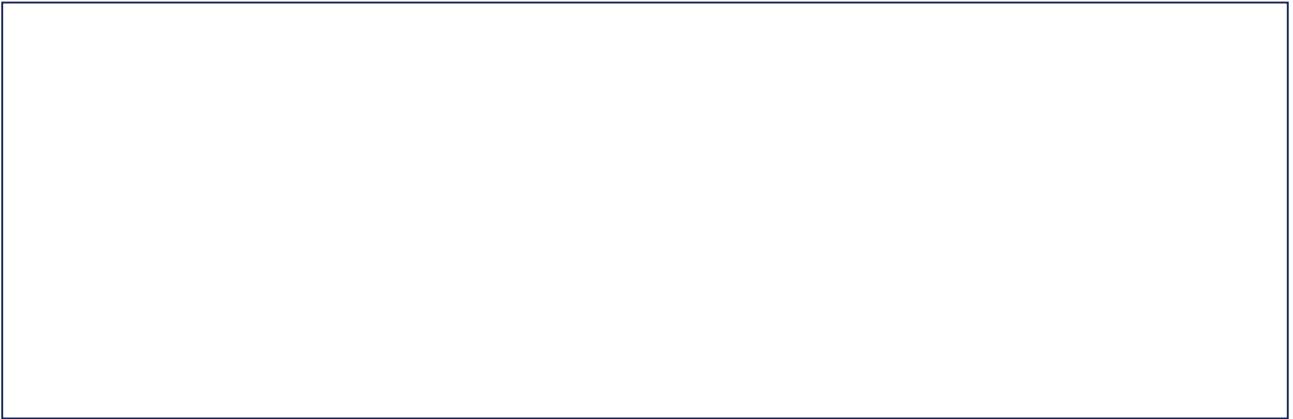
2. Look at these two shapes: A square with a dot in the top-left corner, and a square with a dot in the bottom-left corner. If this is a reflection, what would a triangle with a line at the top reflect as? (2 marks)

3. Find the odd one out: A circle, a square, a pentagon, and a sphere. Explain why your choice is different from the others. (2 marks)

4. In a series of three boxes, the first has one star, the second has three stars, and the third has five stars. If the pattern increases by two each time, how many stars should be in the fourth box? (2 marks)

5. A hexagon is divided into six equal triangles. If two of the triangles are shaded, what fraction of the hexagon is shaded? Write your answer in its simplest form. (2 marks)

Draw: Draw a shape that has at least two lines of symmetry, then draw those lines of symmetry using a dotted line.



Extension challenge: Create your own 3-step pattern sequence using squares, circles, and triangles. Challenge a friend to draw the 4th shape in your sequence!