

Max's Logical Patterns Assessment

Learning objective: To identify, complete, and extend visual sequences and patterns using shapes, rotations, and reflection.

Read each question carefully. Use your reasoning skills to solve the visual puzzles. Show your working out where necessary.

Max the monkey loves to organise his collection of fruit into complex patterns. He uses geometric shapes to track his findings. Help Max solve these logic puzzles to complete his pattern journal.

Word bank: rotation · reflection · sequence · symmetry · clockwise · anticlockwise · pattern

1. Max has a sequence: a triangle, then a square, then a pentagon, then a hexagon. What shape comes next in the sequence and why? (2 marks)

2. A shape is rotated 90 degrees clockwise. If the shape was pointing upwards, which direction is it pointing now? (2 marks)

3. Look at the pattern: Circle, Square, Circle, Square. If this pattern continues for 11 shapes, how many circles will there be in total? Explain your reasoning. (4 marks)

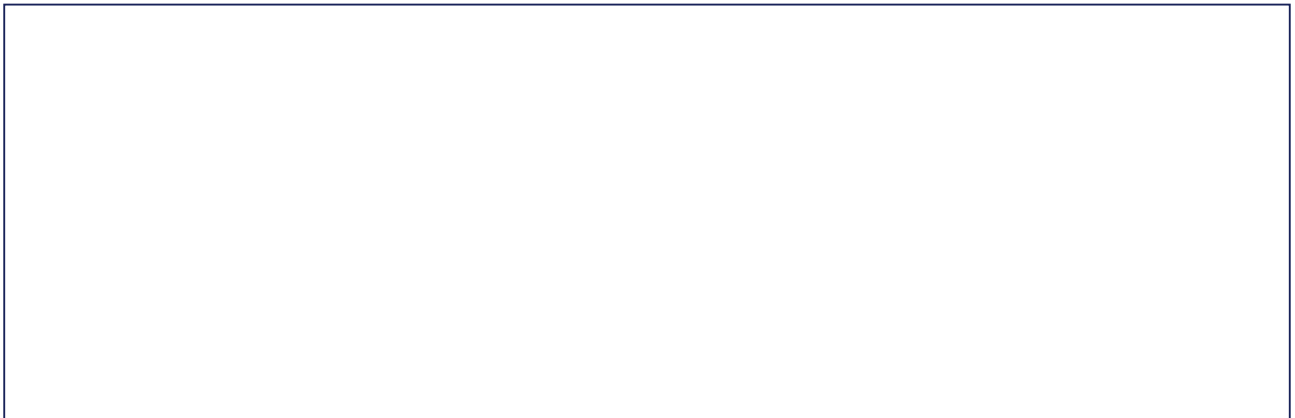
4. Draw the reflection of a capital letter 'A' across a vertical mirror line. (3 marks)

5. Max has a grid. In the first box, there is one dot. In the second, there are three. In the third, there are five. If the pattern continues, how many dots will be in the fifth box? Show the sequence steps. (4 marks)

6. Describe the rule for this sequence: 2, 4, 8, 16. If you were to add a fifth number, what would it be and how did you calculate it? (5 marks)

7. Explain the difference between a reflection and a rotation using an example with a shape of your choice. (5 marks)

Draw: Draw a pattern of three shapes that changes by rotating 45 degrees clockwise each time.



Extension challenge: Total: /25