Zara’s Wonderful World of Patterns

1. A sequence showing square, circle, square, circle (or similar). (2 marks)

Working: The student must alternate the two shapes consistently.

1 mark for using both shapes, 1 mark for the repeating order.

2. Symmetry means when one side is a mirror image of the other. A butterfly or a leaf are examples. (3 marks)

Look for: The concept of 'mirror image' or 'matching sides' and a natural example.

Good: Symmetry is when things look the same. A butterfly has it.

Better: Symmetry is when you can fold something in half and both sides match. A leaf is symmetrical.

Best: Symmetry means one side is a perfect mirror image of the other. A butterfly's wings show this perfectly.

What moves an answer up: Moving from 'looks the same' to 'mirror image' and 'folding' shows deeper conceptual understanding.

3. Square. It has straight edges that fit together perfectly without leaving any gaps. (4 marks)

Working: Squares have 90-degree angles that allow them to tile a flat surface.

1 mark for choosing Square, 3 marks for the explanation regarding straight edges/no gaps.

4. Blue, Red. (2 marks)

Working: The sequence is a repeating set of three: (Blue, Red, Yellow). After Yellow, the pattern restarts.

1 mark for each correct colour in the sequence.

5. Place the leaf under a piece of paper and rub over the top with a crayon. Materials: Leaf, paper, crayon (or pencil). (4 marks)

Working: The process requires pressure to transfer the texture of the veins.

2 marks for the method, 2 marks for listing two appropriate materials.

6. Design must show a symmetrical bag with repeating geometric shapes and colours. Explanation must link these choices. (10 marks)

Look for: Evidence of all three criteria (shapes, repeating colours, symmetry) and a clear explanation.

Good: I drew triangles and squares. They repeat in blue and red. It is the same on both sides.

Better: I used squares and triangles in a repeating pattern. It is symmetrical because the left side is a mirror of the right side.

Best: My design uses a repeating motif of squares and triangles. I used a blue and red sequence. It is symmetrical because if you draw a line down the centre, both sides are identical.

What moves an answer up: The 'best' answer uses the specific vocabulary from the word bank and explains the 'why' behind the symmetry.

What a secure answer looks like

A secure answer demonstrates an understanding that patterns are rule-based and predictable. Students should use the provided vocabulary (symmetry, motif, tessellation) correctly in their explanations.

If your child is stuck

Ask the child to trace a line of symmetry on an object or to physically lay out shapes to see which ones fit together without gaps.

Common mistakes to watch for

Children often confuse 'symmetry' with 'repetition' or struggle to identify that a shape must have straight edges to tessellate effectively.