Zara’s Wonderful World of Patterns

1. Triangle, Circle, Triangle. (2 marks)

Working: The pattern alternates between Triangle and Circle. The next three are Triangle, then Circle, then Triangle.

1 mark for the correct shapes in order, 1 mark for having exactly three shapes.

2. The core is: Blue star, yellow square. (2 marks)

Working: The pattern repeats 'Blue star, yellow square' over and over.

Award 2 marks for identifying both shapes in the correct order.

3. Green. (1 mark)

Working: The sequence is Red, Green, Red, Green. After the second red, the next colour must be green.

1 mark for the correct colour.

4. Yes, most petals are symmetrical. Patterns in nature help plants grow or attract insects. (3 marks)

Look for: The child identifies symmetry (matching sides) and provides a biological reason (attracting pollinators or efficient growth).

Good: Yes, it is symmetrical because both sides look the same.

Better: Yes, it is symmetrical because if you fold it in half, the sides match. Patterns help flowers look pretty for bees.

Best: Yes, it is symmetrical because it has a line of symmetry down the middle. Patterns in nature, like on petals, help attract insects to help the plant grow.

What moves an answer up: Moving up requires adding specific evidence about symmetry and a functional reason for the pattern in nature.

5. Example: Square, Triangle, Circle, Square, Triangle, Circle. Core: Square, Triangle, Circle. (3 marks)

Look for: A clear sequence of three distinct shapes that repeats at least once, with the core clearly identified.

Good: Square, Triangle, Circle, Square, Triangle, Circle.

Better: Square, Triangle, Circle, Square, Triangle, Circle. The core is Square, Triangle, Circle.

Best: Square, Triangle, Circle, Square, Triangle, Circle. The core is [Square, Triangle, Circle] because that is the part that repeats.

What moves an answer up: Moving up requires explicitly labelling the core and explaining why it is the core.

What a secure answer looks like

A secure answer demonstrates an understanding that a pattern core is the smallest unit that repeats. Children should be able to identify and replicate these sequences accurately.

If your child is stuck

Ask the child to say the pattern out loud (e.g., 'Triangle, Circle, Triangle, Circle'). Hearing the rhythm often helps them identify the repeating part.

Common mistakes to watch for

Children often include too many shapes in the 'core' (e.g., identifying the whole sequence as the core) or forget to alternate the shapes correctly when extending the pattern.