Patterns of the Season: Winter Art Design

1. Zara must place a matching triangle in the top-right quadrant for vertical symmetry, and another in the bottom-left quadrant for horizontal symmetry. To achieve perfect symmetry across both axes, she needs a triangle in all four quadrants. (2 marks)

Working: Vertical symmetry mirrors across the y-axis; horizontal symmetry mirrors across the x-axis.

1 mark for identifying the correct quadrant(s), 1 mark for the reasoning regarding reflection.

2. Blue and silver (or white/ice blue). These are chosen because they reflect the cold, crisp nature of winter, ice, and frost. (2 marks)

Look for: Identification of two cool colours and a link to winter/cold themes.

Good: Blue and white because they look like winter.

Better: Blue and silver are cool colours because they remind me of ice and snow.

Best: Blue and silver are effective cool colours because they evoke the temperature of winter and the visual appearance of frost and ice.

What moves an answer up: Moving from simple identification to explaining the sensory and thematic connection to the season.

3. Square, Circle, Triangle, Square, Circle, Triangle, Square, Circle, Triangle. (2 marks)

Working: The pattern repeats every 3 shapes. 9 divided by 3 equals 3 full cycles.

All 9 shapes must be in the correct sequence.

4. £2.25 (2 marks)

Working: £4.50 + £3.25 = £7.75. £10.00 - £7.75 = £2.25.

1 mark for correct addition, 1 mark for correct subtraction.

5. Warm colours (reds, yellows, oranges) suggest heat, while cool colours (blues, greens, purples) suggest cold. To make a red robin stand out, place it against a cool-toned snowy background to create high contrast. (3 marks)

Look for: Definition of warm/cool and the application of contrast.

Good: Warm colours are hot and cool are cold. You use contrast to make the red bird pop against the white snow.

Better: Warm colours like red feel like heat, while cool colours like blue feel like ice. Using contrast makes the red robin stand out because red and blue/white are opposites on the colour wheel.

Best: Warm colours evoke heat, whereas cool colours represent the temperature of winter. By placing a red robin against a cool-toned snowy background, the high contrast between the warm red and the cool white/blue makes the subject visually prominent.

What moves an answer up: Moving from basic definitions to using specific art terminology like 'visually prominent' and 'colour wheel' concepts.

What a secure answer looks like

A secure answer demonstrates an understanding that mathematical symmetry requires precise reflection and that colour theory is used to create specific moods or focal points.

If your child is stuck

Suggest the child uses a mirror to check their symmetry designs or looks at a colour wheel to identify the difference between warm and cool tones.

Common mistakes to watch for

Confusing vertical and horizontal symmetry, or failing to complete the full sequence of the repeating pattern.