Max’s Magnificent Movement Quiz

Learning objective: To identify, describe, and represent the position of a shape following a reflection or translation, and to understand how shapes move on a coordinate grid.

Help Max the monkey solve his coordinate puzzles! Read each question carefully and write your answer clearly. Remember to use your knowledge of x and y axes.

Answer Key: 1. C (*Translation), 2. False, 3. Reflection, 4. B (*(4, 7)), 5. True, 6. D (*The size of the shape stays the same), 7. True, 8. Translation, 9. A (*A mirror line), 10. (3, 2).

Word bank: Translation · Reflection · Coordinate · Vertex · Axis · Grid · Quadrant · Image

1. 1. When a shape moves from one position to another without turning or flipping, what is this movement called? A) Rotation B) Reflection C) Translation* D) Enlargement (1 mark)

2. 2. True or False: When you reflect a shape across a vertical mirror line, the shape changes size. (1 mark)

3. 3. What is the mathematical term for 'flipping' a shape over a line? (1 mark)

4. 4. If a vertex is at (1, 2) and it is translated 3 units right and 5 units up, where is the new vertex? A) (3, 5) B) (4, 7)* C) (1, 7) D) (4, 2) (1 mark)

5. 5. True or False: In a translation, the distance between the points on the shape remains the same. (1 mark)

6. 6. Which of these is true about a reflected shape? A) The shape turns upside down B) The shape moves to a different quadrant C) The shape becomes a mirror image* D) The shape changes its internal angles (1 mark)

7. 7. True or False: A coordinate grid is made up of an x-axis (horizontal) and a y-axis (vertical). (1 mark)

8. 8. Max moves a triangle 4 units left and 2 units down. Is this a reflection or a translation? (1 mark)

9. 9. To perform a reflection, you must have: A) A mirror line* B) A set of coordinates C) A compass D) A protractor (1 mark)

10. 10. A point is at (5, 5). If it is translated 2 units left and 3 units down, what are the new coordinates? (1 mark)

Draw: Draw a small square on a piece of graph paper. Now, reflect it across a vertical line and label the original 'Shape A' and the new one 'Shape B'.

Extension challenge: Challenge: If a square has vertices at (1, 1), (3, 1), (3, 3), and (1, 3), what would the new coordinates be if you reflected it across the y-axis?