

Year 5 Maths Assessment: Exploring Coordinates

Learning objective: To identify, describe, and represent the position of a shape following a reflection or translation, and to plot coordinates in the first quadrant.

Read each question carefully. Use a pencil and ruler for all drawings. Remember to write your coordinates in the correct format: (x, y).

Max the monkey is helping his friends map out a new playground. He has created a grid where every unit represents 1 metre. Max needs your help to ensure the equipment is placed in the correct positions.

Word bank: x-axis · y-axis · origin · coordinate · quadrant · translation · reflection · horizontal · vertical

1. Max places a slide at (3, 2) and a swing set at (3, 7). What is the vertical distance between the slide and the swing set? Show your working. (2 marks)

2. A climbing frame is located at (5, 4). If Max translates the climbing frame 3 units to the right and 2 units up, what will the new coordinates be? (2 marks)

3. Zara the zebra draws a triangle on the grid with vertices at (1, 1), (4, 1), and (2, 5). She reflects the triangle across the vertical line $x=5$. Explain where the new vertices of the reflected triangle will be. (4 marks)

4. Kit the fox finds a treasure map on a grid. The treasure is at (8, 9). He starts at (0, 0). Describe the journey Kit must take using only horizontal and vertical movements. (3 marks)

5. Look at the grid provided below. A rectangle has three corners at (2, 2), (6, 2), and (2, 5). What are the coordinates of the fourth corner? Explain how you know. (4 marks)

6. Max wants to build a path that connects three points: (1, 8), (4, 4), and (8, 8). Draw these points on a grid and connect them. If the path costs £15 per metre, and each unit on the grid is 2 metres, calculate the total cost to build the path. Show your full calculation. (5 marks)

7. Define what an 'origin' is on a coordinate grid and state its coordinates. (2 marks)

Draw: Draw a 10x10 coordinate grid on your paper. Clearly label the x-axis (horizontal) and the y-axis (vertical) from 0 to 10.



Extension challenge: Total: /25