

Max's Map of the Meadow

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

Max the monkey is helping the forest animals organize their meadow. Use the grid provided to help him locate the items and solve the coordinate puzzles.

Max is designing a new meadow map. He has placed the pond at (2, 3) and the oak tree at (8, 5). He wants to build a vegetable patch for the rabbits by translating the pond 4 squares to the right and 2 squares up. Zara the zebra wants to place her art easel exactly 3 squares below the oak tree. Help Max finish his map so all the animals know where to go!

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

1. Using the information in the passage, what are the new coordinates for the vegetable patch? (2 marks)

2. What are the coordinates for Zara's art easel? (2 marks)

3. If Max moves his monkey swing from (1, 1) to (1, 6), how many squares has it been translated vertically? (1 mark)

4. Explain the difference between the x-axis and the y-axis in your own words. (2 marks)

5. If a square has corners at (4, 4), (6, 4), (4, 6) and (6, 6), what is the shape's area in square units? (2 marks)

Draw: Draw a 10x10 coordinate grid. Plot the pond at (2, 3), the oak tree at (8, 5), and the vegetable patch at your calculated coordinates. Label each point clearly.



Extension challenge: Imagine the y-axis is a mirror. If you have a triangle with vertices at (1, 1), (3, 1), and (2, 4), where would the reflected triangle appear if you reflected it across the y-axis?