

Max's Map of the Magical Meadow

Learning objective: To describe positions on a 2D grid as coordinates in the first quadrant.

Max the monkey is helping his friends find their favourite spots in the Magical Meadow. Use the grid below to identify the coordinates for each character's location. Remember: along the corridor (x-axis) first, then up the stairs (y-axis).

Max has designed a treasure map for his friends. The meadow is set out on a grid. Pip the caterpillar is resting on a leaf at (2, 3). Nova the owl is perched high in an oak tree at (5, 7). Ellie the elephant is standing near the refreshing pond at (8, 2), while Bea the honeybee is busy collecting nectar from a bright sunflower located at (4, 5). Max loves using these coordinates to ensure everyone knows exactly where to meet for their afternoon picnic.

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

1. Write the coordinates for the following locations: Pip the caterpillar and Nova the owl. (2 marks)

2. If Ellie the elephant moves from (8, 2) to a new patch of grass at (8, 5), explain why the first number in her coordinate remains the same. (2 marks)

3. Bea the honeybee wants to visit Pip the caterpillar. If she flies from (4, 5) to (2, 3), how many units left and how many units down does she travel? (3 marks)

4. Max places a treasure chest at (6, 6). If you move 2 units right and 1 unit up from the treasure chest, what is the new coordinate? (2 marks)

5. Compare and contrast the movement of moving vertically versus moving horizontally on a grid. How do the coordinates change? (3 marks)

Draw: Draw a 10x10 grid. Plot the points for Pip (2, 3), Nova (5, 7), Ellie (8, 2), Bea (4, 5), and the treasure chest at (6, 6). Label each point clearly with the character's name.



Extension challenge: Justify your answer: If you were to create a symmetrical shape on the grid using four points, what coordinates would you choose? Explain why your chosen coordinates form a symmetrical shape and what might happen to the shape if you added 2 to every x-coordinate.