

Max's Mapping Adventure: A Coordinates Quiz

Learning objective: To identify, describe and represent the position of a point on a 2D grid as coordinates in the first quadrant.

Max the monkey is mapping out the jungle playground! Help him solve these coordinate puzzles. Remember: walk along the corridor (x-axis) before you climb up the stairs (y-axis).

Answer Key: 1. (3, 2)*, 2. (0, 0), 3. True, 4. (4, 1), 5. (5, 5), 6. False, 7. (2, 4), 8. 4, 9. 3, 10. To identify the location of a point precisely. Greater Depth Reasoning: (a) If you swap the coordinates, the point moves to a different location because the order represents horizontal and vertical movement. (b) The origin is (0,0) because it is the starting point where both axes intersect.

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

1. Max starts at the origin and moves 3 squares right and 2 squares up. What is his coordinate? A) (2, 3) B) (3, 2)* C) (0, 3) D) (2, 2) (1 mark)

2. What are the coordinates of the origin on a standard 2D grid? (1 mark)

3. True or False: The x-axis is always the horizontal line on a coordinate grid. (1 mark)

4. A banana is located at (4, 1). If Max moves 0 squares right and 3 squares up, where is he now? A) (4, 4)* B) (7, 1) C) (4, 1) D) (1, 4) (1 mark)

5. If a point is plotted at (5, 5), how many squares have you moved in total from the origin? A) 5 B) 0 C) 10* D) 25 (1 mark)

6. True or False: (1, 3) and (3, 1) represent the same location on a grid. (1 mark)

7. Max is at (2, 1). He jumps 3 squares up. What is his new coordinate? (1 mark)

8. On a grid where the x-axis goes to 6 and the y-axis goes to 6, how many units are there between (1, 2) and (5, 2)? (1 mark)

9. If you are at (3, 4) and you move down 1 square, what is your new y-coordinate? (1 mark)

10. Why is it important to always write the x-coordinate before the y-coordinate? (1 mark)

Draw: Draw a 6x6 grid. Plot a treasure chest at (2, 3), a monkey at (5, 1), and a banana at (5, 5). Draw a line showing the shortest path for the monkey to collect the banana and then the treasure.



Extension challenge: Greater Depth Challenges: 1) Explain why swapping the numbers in a coordinate (e.g., (1, 5) vs (5, 1)) changes the location. 2) If you know the origin is (0, 0), justify why moving 'right' corresponds to the x-axis. 3) What might happen if you were given coordinates that exceeded the size of your grid? 4) Compare and contrast moving diagonally versus moving in 'L' shapes on a grid. 5) Create a coordinate treasure map for a friend to solve. 6) If a shape has vertices at (1,1), (1,3), and (3,1), what shape have you created and how do you know?