

Max's Coordinate Treasure Hunt

Learning objective: To describe positions on a 2-D grid as coordinates in the first quadrant and plot points given coordinates.

Max the Monkey is planning a garden party, but he has hidden his party supplies across a coordinate grid! Each item sits on a specific coordinate point (x, y). Read the clues carefully to identify the items, plot the missing items for his map, and solve the logic problems to ensure the party is a success. Remember: walk along the corridor (the x-axis) before you go up the stairs (the y-axis)!

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

1. Max has placed a basket of apples at (2, 5) and a jug of juice at (8, 5). If he places a plate of sandwiches exactly halfway between them on the same horizontal line, what are the coordinates of the sandwiches? Explain your reasoning. (2 marks)

2. The party decorations are at (4, 1), (4, 6), and (9, 1). Plot these points on a grid. If Max wants to form a right-angled triangle by adding one more point, where could the fourth point be? Justify your choice. (2 marks)

3. Compare and contrast the coordinates (3, 7) and (7, 3). Why is the order of the numbers important when navigating the grid? (2 marks)

4. Max hides a balloon at (1, 8). He moves 3 units to the right and 4 units down. What are the new coordinates of the balloon? Show your calculation. (2 marks)

5. What might happen to the position of an object if you accidentally swap the x and y values? Use an example to illustrate your answer. (2 marks)

6. If the total cost of the party items is £12.00 and they are spread across 4 coordinate points equally, how much does each 'coordinate location' cost in terms of supplies? Is this a fair way to distribute the budget? (2 marks)

Draw: Draw a 10x10 coordinate grid. Plot the following: a tree at (1, 1), a picnic blanket at (5, 5), and a birdhouse at (9, 9). Then, draw a path connecting them using straight lines and label the coordinates of the midpoints of those lines.



Extension challenge: Design your own treasure map on a coordinate grid. Write three 'Greater Depth' riddles for a partner, such as: 'I am at a coordinate where the sum of x and y is 10, and x is double y. Where am I?'