

Max's Coordinate Quest: Mastering the Grid

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.

Use these flashcards to test your knowledge of coordinate geometry. Max the monkey has hidden treasures across the grid—can you locate them all?

What is the 'x-axis' on a coordinate grid?

The horizontal line that runs along the bottom of the grid.

What is the 'y-axis' on a coordinate grid?

The vertical line that runs up the side of the grid.

When writing a coordinate pair (x, y), which number do you look for first?

You always look for the x-coordinate (the horizontal position) first.

What is the 'origin' and what are its coordinates?

The origin is the point where the x and y axes meet, represented by (0, 0).

Explain how to plot the point (3, 5).

Start at the origin, move 3 units to the right along the x-axis, then move 5 units up the y-axis.

Define 'translation' in the context of geometry.

A movement where a shape slides to a new position without rotating or changing size.

What happens to the coordinates of a shape after a horizontal translation of +4?

The x-coordinate of every vertex increases by 4, while the y-coordinates remain the same.

Define 'reflection' in geometry.

A transformation where a shape is 'flipped' over a mirror line to create a mirror image.

If a square has vertices at (1,1), (3,1), (3,3), and (1,3), what is the perimeter of the square?

Each side is 2 units long, so the perimeter is 8 units.

How can you distinguish between an x-coordinate and a y-coordinate using the phrase 'along the corridor, up the stairs'?

'Along the corridor' refers to moving across the x-axis, and 'up the stairs' refers to moving up the y-axis.