Max’s Transformations Mastery: Year 6 Maths Flashcards

Learning objective: To identify, describe, and perform transformations including translations, reflections, and rotations on a 2D coordinate grid.

Use these flashcards to test your knowledge of geometry and transformations. Max the monkey is ready to help you solve these coordinate puzzles!

What is a translation?

A transformation where a shape moves from one position to another without turning or changing size.

If a shape moves 3 units right and 4 units down, how do you describe this translation?

A translation vector of (3, -4).

What is a reflection?

A transformation where a shape is 'flipped' over a mirror line, creating a mirror image.

When reflecting a shape, what happens to the distance of each point from the mirror line?

The distance remains exactly the same for every corresponding point on the original and the image.

What is a rotation?

A transformation where a shape turns around a fixed point called the centre of rotation.

To describe a rotation fully, what three pieces of information do you need?

The direction (clockwise or anticlockwise), the number of degrees, and the centre of rotation.

If Max rotates a shape 90 degrees clockwise, does the shape's size or shape change?

No, the shape remains congruent (identical in size and shape).

What is the 'origin' on a coordinate grid?

The point where the x-axis and y-axis cross, represented by the coordinates (0,0).

What is a 'vertex' in the context of transformations?

A corner of a 2D shape where two or more edges meet.

How can you tell if a transformation is a reflection rather than a rotation?

In a reflection, the orientation of the shape is reversed; in a rotation, the orientation remains the same.