

Connecting Points to Form Shapes

Chapter 13: Connecting the Dots · Topic 2

Key Concept

For example, plotting and connecting the points $(0,0)$, $(4,0)$, $(4,3)$, and $(0,3)$ in order, then back to the start, forms a rectangle, since opposite sides are parallel and equal in length based on the coordinate differences. This activity strengthens spatial reasoning by requiring students to visualise how abstract numerical coordinates translate into concrete geometric shapes, a skill that becomes increasingly important in higher-level coordinate geometry and even in fields like engineering design and computer graphics.

Quick Revision Notes

- Connecting plotted points in order can form recognisable geometric shapes.
- The order of connection determines the final shape formed.
- Example: $(0,0)$, $(4,0)$, $(4,3)$, $(0,3)$ connected in order forms a rectangle.
- This skill links numerical coordinates to concrete geometric visualisation.

Practice Questions

- 1 Plot four points and connect them to form a square.
- 2 Plot the points $(1,1)$, $(5,1)$, $(3,4)$ and connect them - what shape is formed?
- 3 Explain why the order in which points are connected affects the resulting shape.