

Reflection

Chapter 12: Reflection · Topic 1

Key Concept

Reflecting a point (x,y) across the x-axis gives $(x,-y)$, while reflecting across the y-axis gives $(-x,y)$.

Reflecting a point across the line $y=x$ swaps the coordinates, giving (y,x) as the reflected point.

When reflecting a shape, each point of the shape is reflected individually, maintaining the shape's size and form but reversing orientation.

Understanding reflection helps us solve coordinate geometry problems and is fundamental to concepts like symmetry and transformations.

Quick Revision Notes

- Reflecting (x,y) across x-axis gives $(x,-y)$.
- Reflecting across y-axis gives $(-x,y)$.
- Reflecting across $y=x$ gives (y,x) .
- Shape reflection reflects each point individually.
- Size and form stay the same; orientation reverses.
- Reflection is a type of transformation.
- It's fundamental for symmetry concepts.
- Practice builds coordinate geometry skills.

Practice Questions

- 1 Find the reflection of $(5,2)$ across the x-axis.
- 2 Find the reflection of $(5,2)$ across the y-axis.
- 3 Find the reflection of $(5,2)$ across $y=x$.
- 4 Reflect a simple triangle across the x-axis.
- 5 Discuss the connection between reflection and symmetry.
- 6 Explain reflection in your own words.