

Lesson 7-9

Reinforce Understanding

Reflect Points Across Axes

I can reflect points across the x-axis and y-axis on the coordinate plane.

Worked model

I will reflect (3, 2) over the y-axis.

1. The y-axis is the vertical line, so the point flips left or right. That changes the x-coordinate.
2. The x changes sign: 3 becomes -3. The y stays the same: 2 stays 2.
3. So the reflection of (3, 2) over the y-axis is (-3, 2).

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Match each point and axis to its reflection.

Write the letter of the matching item on each line.

1. _____ (2, 5) over y-axis
2. _____ (-3, 1) over y-axis
3. _____ (4, -6) over x-axis
4. _____ (-1, -4) over x-axis
5. _____ (5, 2) over x-axis
6. _____ (-6, 3) over y-axis

- A(-2, 5)
- B(3, 1)
- C(4, 6)
- D(-1, 4)
- E(5, -2)
- F(6, 3)

2. Put the steps in order for reflecting (5, -3) over the y-axis.

Write the name of the correct group on each line.

Groups:

- _____ Start with the point (5, -3)
- _____ Identify the axis of reflection: y-axis
- _____ The y-axis is vertical, so the x-coordinate changes sign
- _____ Change x from 5 to -5, keep y as -3
- _____ The reflection is (-5, -3)