

## Lesson 7-9 • Group 2

# Reinforce Understanding

## 7.9 Small Group • Group 2

I can reflect points across the x-axis and y-axis on the coordinate plane, explain why the method works, and use it on a problem I have not seen before.

**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. Plot (1, 4) and its reflections: over the x-axis, over the y-axis, and over both axes**

Plot and label each point on the grid.

Show your thinking

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**2. Find the reflection of each point over the given axis.**

Complete the table. Show how you found each value.

| Original Point | Axis   | Reflected Point |
|----------------|--------|-----------------|
| (3, -7)        | x-axis |                 |
| (-5, 2)        | y-axis |                 |
| (8, -1)        | x-axis |                 |
| (-4, -6)       | y-axis |                 |
| (0, 9)         | x-axis |                 |
| (-3, 0)        | y-axis |                 |

Show your work

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**3. Captain Vega folds the map along the x-axis. A marker at (7, 2) lands on its mirror image. What are the new coordinates?**

Circle the letter of the best answer. Show how you know.

- A. (-7, 2)
- B. (-7, -2)
- C. (2, 7)
- D. (7, -2)

Show your work

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