Lesson 16: Symmetry in the Coordinate Plane

Problem Set

1. Locate a point in Quadrant IV of the coordinate plane. Label the point $A$*,* and write its ordered pair next to it.
	1. Reflect point $A$ over an axis so that its image is in Quadrant III. Label the image $B$,and write its ordered pair next to it. Which axis did you reflect over? What is the only difference in the ordered pairs of points $A$and $B$?
	2. Reflect point $B$over an axis so that its image is in Quadrant II. Label the image $C$,and write its ordered pair next to it. Which axis did you reflect over? What is the only difference in the ordered pairs of points $B$and $C$? How does the ordered pair of point $C$relate to the ordered pair of point $A$?
	3. Reflect point $C$over an axis so that its image is in Quadrant I. Label the image $D$, and write its ordered pair next to it. Which axis did you reflect over? How does the ordered pair for point $D$compare to the ordered pair for point $C$? How does the ordered pair for point $D$ compare to points $A$and $B$?
2. Bobbie listened to her teacher’s directions and navigated from the point $\left(-1, 0\right)$ to $\left(5,-3\right)$. She knows that she has the correct answer, but she forgot part of the teacher’s directions. Her teacher’s directions included the following:

“Move $7$ units down, reflect about the ? -axis, move up $4$ units, and then move right $4$ units.”

Help Bobbie determine the missing axis in the directions, and explain your answer.