

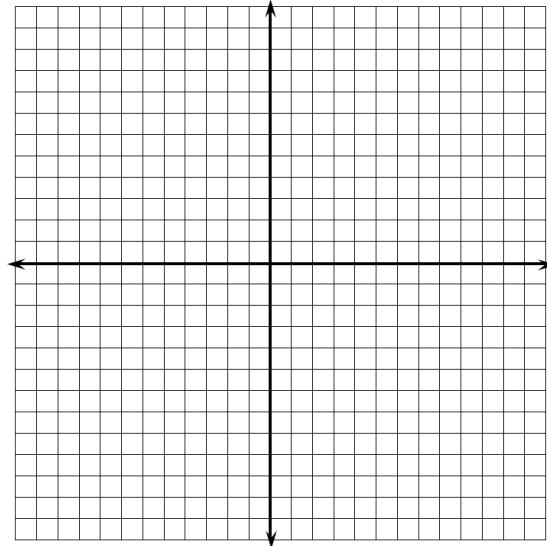
**Problem Set**

1. Locate a point in Quadrant IV of the coordinate plane. Label the point  $A$ , and write its ordered pair next to it.

a. 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  $B$ ?

b. 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  $A$ ?

c. Reflect point  $C$  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  $(-1, 0)$  to  $(5, -3)$ . 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.