Vocabulary Check

1. **CCSS** **Be Precise** Define *transformation* using the words *preimage* and *image*. (Lesson 1)

   Sample answer: A transformation maps a figure, the preimage, onto a
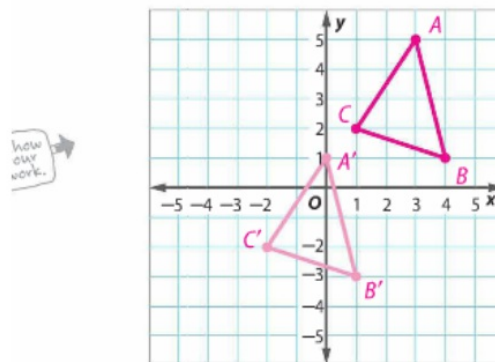
   new figure called the image.

2. Describe the role of the line of reflection in a transformation. (Lesson 2)

   Sample answer: The line of reflection is the fixed line over which a
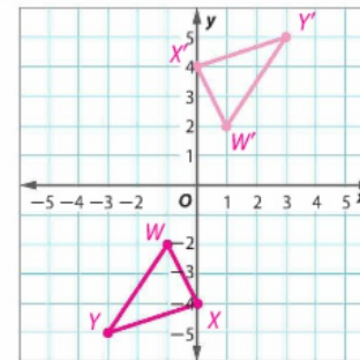
   figure is reflected.

Graph each triangle with the given vertices. Then graph the image after the given transformation and write the coordinates of the image's vertices.

(Lessons 1 and 2)

3. $\triangle ABC$ with vertices $A(3, 5)$, $B(4,1)$, and $C(1, 2)$; translation of 3 units left and 4 units down

   $A'(0, 1)$, $B'(1, -3)$, $C'(-2, -2)$

4. $\triangle WXY$ with vertices $W(-1, -2)$, $X(0, -4)$, and $Y(-3, -5)$; reflection over the x-axis followed by a reflection over the y-axis

   $W'(1, 2)$, $X'(0, 4)$, $Y'(3, 5)$

how our work.

5. **CCSS** **Persevere with Problems** Point D is translated 5 units right and 2 units down, then reflected over the y-axis. Write an algebraic representation to represent the final location of point D. (Lessons 1 and 2)

   $(x, y) \rightarrow (-x - 5, y - 2)$