

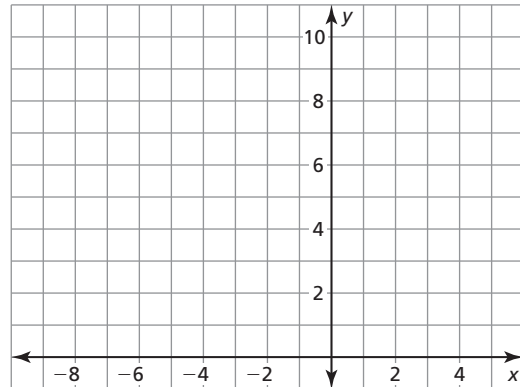
**4.6** Notetaking with Vocabulary (continued)**Extra Practice**

In Exercises 1–3, graph the polygon with the given vertices and its image after the similarity transformation.

1.  $A(3, 6)$ ,  $B(2, 5)$ ,  $C(4, 3)$ ,  $D(5, 5)$

**Translation:**  $(x, y) \rightarrow (x - 5, y - 3)$

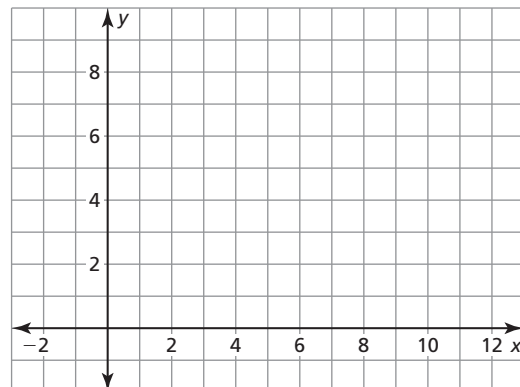
**Dilation:**  $(x, y) \rightarrow (3x, 3y)$



2.  $R(12, 8)$ ,  $S(8, 0)$ ,  $T(0, 4)$

**Dilation:**  $(x, y) \rightarrow \left(\frac{1}{4}x, \frac{1}{4}y\right)$

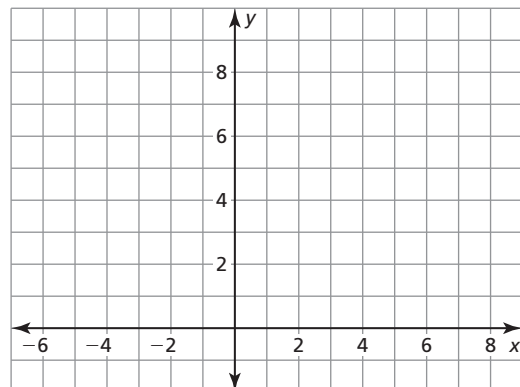
**Reflection:** in the  $y$ -axis



3.  $X(9, 6)$ ,  $Y(3, 3)$ ,  $Z(3, 6)$

**Rotation:**  $90^\circ$  counter-clockwise about the origin

**Dilation:**  $(x, y) \rightarrow \left(\frac{2}{3}x, \frac{2}{3}y\right)$



**4.6** Notetaking with Vocabulary (continued)

In Exercises 4–6, describe the similarity transformation that maps the preimage to the image.

