Name _____ **Date** _____

LESSON 9.1

Practice B

For use with pages 572–579

Use the translation $(x, y) \rightarrow (x + 6, y - 3)$.

1. What is the image of $A(3, 2)$?

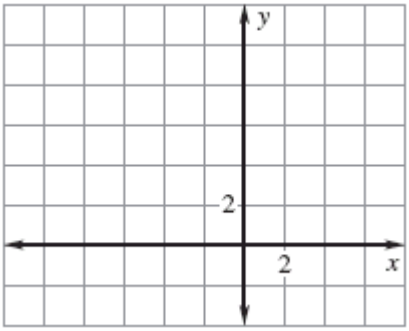
2. What is the image of $B(-4, 1)$?

3. What is the preimage of $C'(2, -7)$?

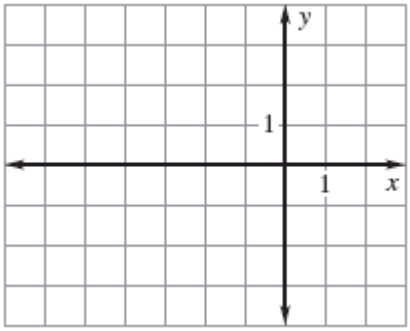
4. What is the preimage of $D'(-3, -2)$?

The vertices of ΔABC are $A(-1, 1)$, $B(4, -1)$, and $C(2, 4)$. Graph the image of the triangle using prime notation.

5. $(x, y) \rightarrow (x - 3, y + 5)$

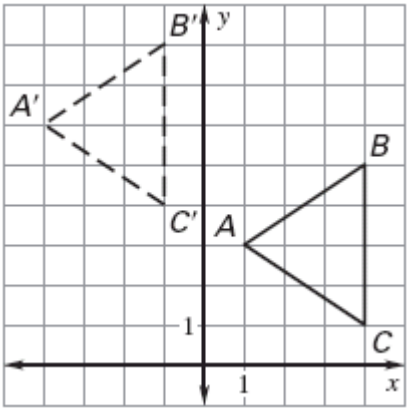


6. $(x, y) \rightarrow (x - 4, y - 2)$

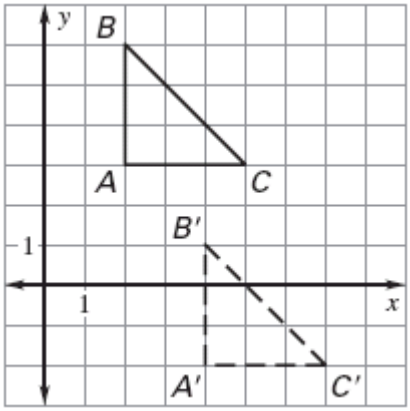


$\Delta A'B'C$ is the image of ΔABC after a translation. Write a rule for the translation. Then verify that the translation is an isometry.

7.

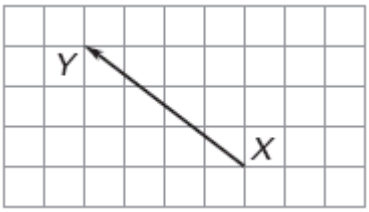


8.

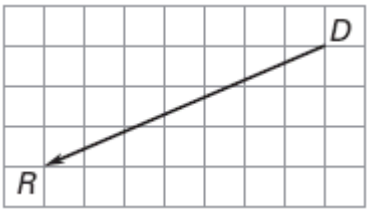


Name the vector and write its component form.

9.



10.



Use the point *P*(5, -2). Find the component form of the vector that describes the translation to *P′*.

11. P' *(2,* 0)

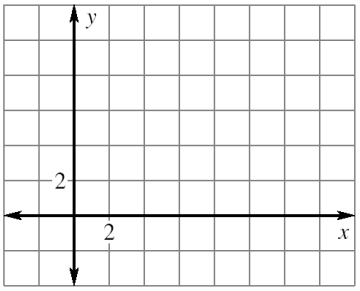
12. P' (8, –3)

13. P' *(0,* 4)

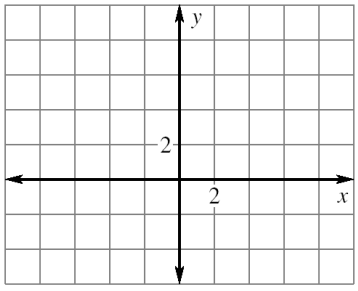
14. P' (–5,–4)

The vertices of Δ *ABC* are *A*(1. 2), *B*(2, 6), and *C*(3, 1). Translate Δ *ABC* using the given vector. Graph Δ *ABC and* its image.

15. ⟨8, 2⟩

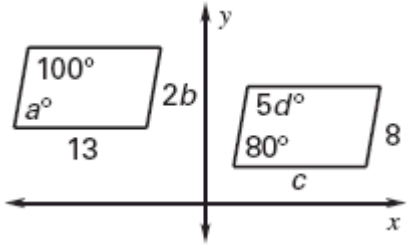


16. ⟨-7, –3⟩



Find the value of each variable in the translation.

17.



18.