9-1 Standardized Test Prep
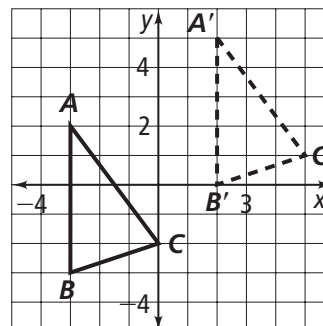## Translations

Multiple Choice

For Exercises 1–4, choose the correct letter.

1. In the diagram, $\triangle A'B'C'$ is an image of $\triangle ABC$. Which rule describes this translation?

   Ⓐ $(x, y) \rightarrow (x - 5, y - 3)$

   Ⓑ $(x, y) \rightarrow (x + 5, y + 3)$

   Ⓒ $(x, y) \rightarrow (x - 3, y - 5)$

   Ⓓ $(x, y) \rightarrow (x + 3, y + 5)$

2. The translation $(x, y) \rightarrow (x + 3, y - 7)$ maps $TUVW$ onto $T'U'V'W'$. What translation maps $T'U'V'W'$ onto $TUVW$?

   Ⓕ $(x, y) \rightarrow (x + 3, y - 7)$ Ⓗ $(x, y) \rightarrow (x + 7, y - 3)$

   Ⓖ $(x, y) \rightarrow (x - 7, y + 3)$ Ⓘ $(x, y) \rightarrow (x - 3, y + 7)$

3. Which of the following is true for an isometry?

   Ⓐ The preimage and the image are congruent.

   Ⓑ The preimage is larger than the image.

   Ⓒ The preimage is smaller than the image.

   Ⓓ The preimage is in the same position as the image.

4. $\triangle RSV$ has coordinates $R(2, 1)$, $S(3, 2)$, and $V(2, 6)$. A translation maps point R to R' at $(-4, 8)$. What are the coordinates for S' for this translation?

   Ⓕ $(-6, -4)$ Ⓖ $(-3, 2)$ Ⓗ $(-3, 9)$ Ⓘ $(-4, 13)$

Short Response

5. $\triangle LMP$ has coordinates $L(3, 4)$, $M(6, 6)$, and $P(5, 5)$. A translation maps point L to L' at $(7, -4)$. What are the coordinates for M' and for P' for this translation?