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17.1 Translations

17.1



Enter the coordinates of the image under the transformation $\langle 5, -12 \rangle$.

$$(x, y) \rightarrow (x + \boxed{5}, y - \boxed{12})$$

$$\begin{array}{l} 1 + 5 = 6 \quad -4 - 12 = -16 \\ (1, -4) \rightarrow (\boxed{6}, \boxed{-16}) \end{array}$$

$$\begin{array}{l} 8 + 5 = 13 \quad -10 - 12 = -22 \\ (8, -10) \rightarrow (\boxed{13}, \boxed{-22}) \end{array}$$

$$\begin{array}{l} 10 + 5 = 15 \quad -16 - 12 = -28 \\ (10, -16) \rightarrow (\boxed{15}, \boxed{-28}) \end{array}$$

2

Apply the vector $\langle 7, 6 \rangle$ to each set of coordinates. Drag and drop each set of coordinates for the resulting image next to the set of coordinates for the preimage.

$$(x, y) \rightarrow (x + \boxed{7}, y - \boxed{6})$$

$(1, 1); (10, 1); (5, 4)$

$(8, -5); (17, -5); (12, -2)$

$(6, 8); (8, 5); (0, 5); (4, 3)$

$(13, 2); (15, -1); (7, -1); (11, -3)$

$(9, -3); (6, 1); (4, 3)$

$(16, -9); (13, -5); (11, -3)$

$(-4, 4); (2, 9); (-8, 3); (9, 4)$

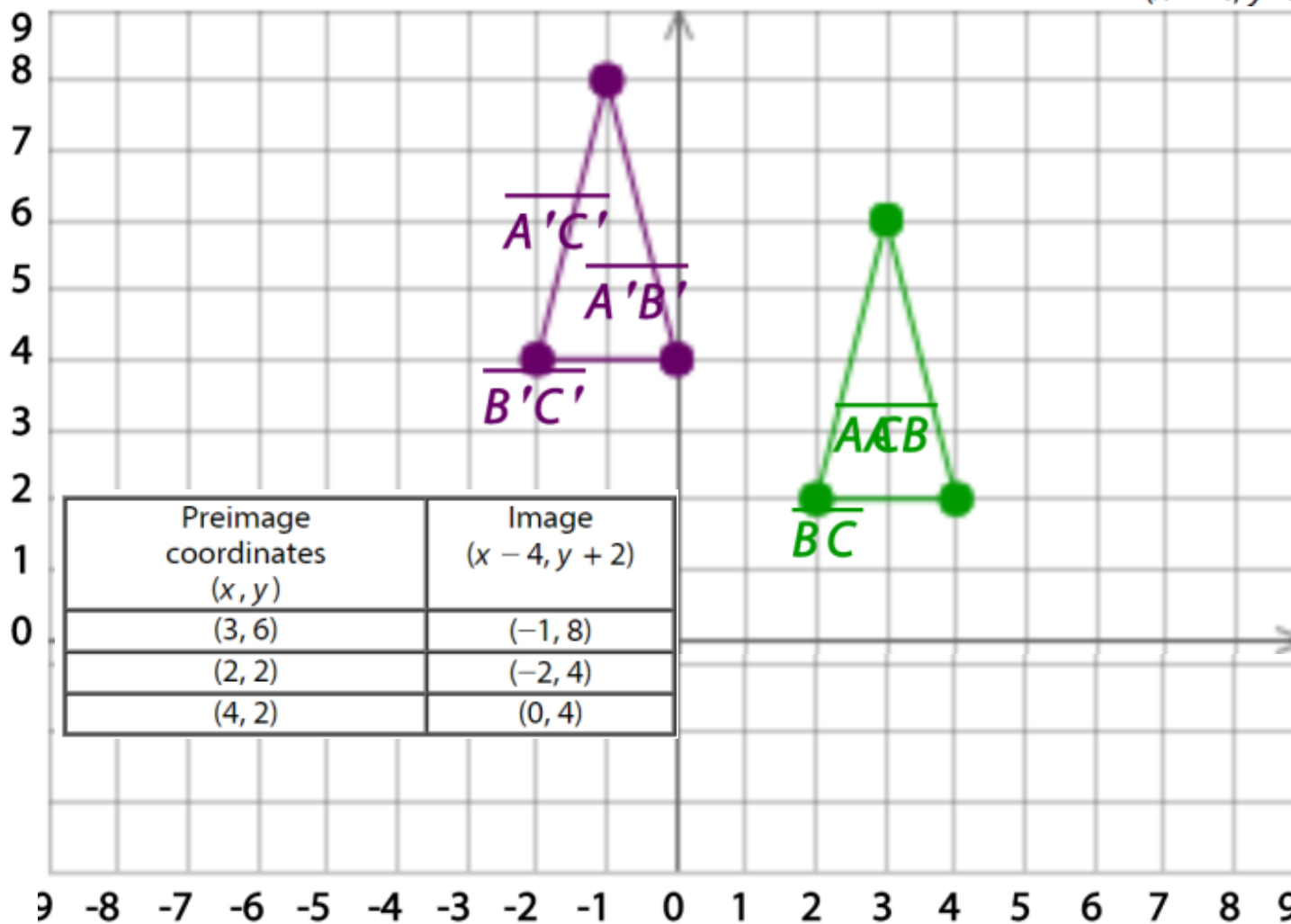
$(3, -2); (9, 3); (-1, -3); (16, -2)$

3

Draw the preimage and image of the triangle under a translation along $\langle 4, 2 \rangle$.

Triangle with coordinates: $A(3, 6)$, $B(2, 2)$, $C(4, 2)$.

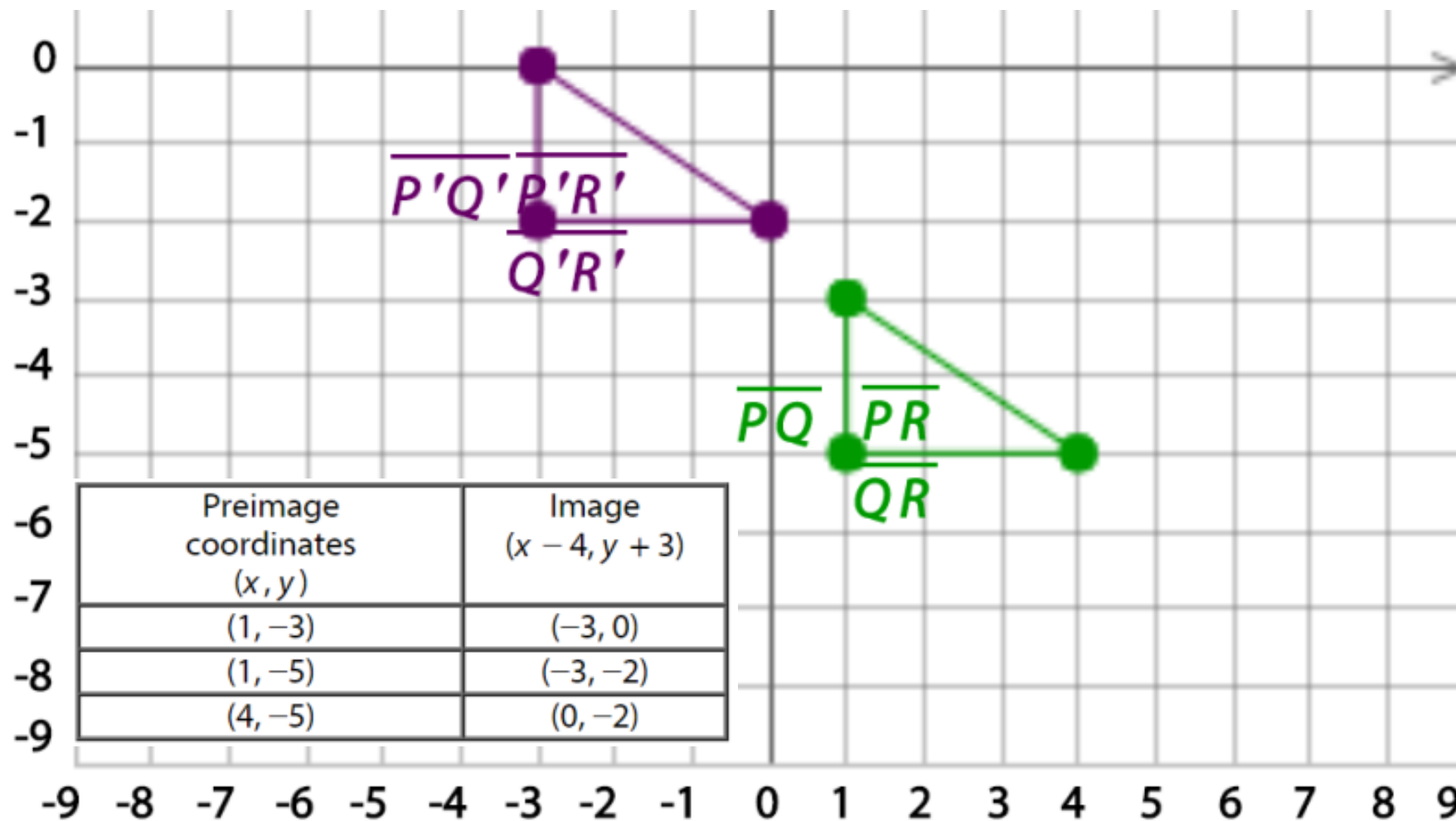
Image
 $(x - 4, y + 2)$



4

Draw the preimage and image of the triangle under a translation along $\langle 4, 3 \rangle$.

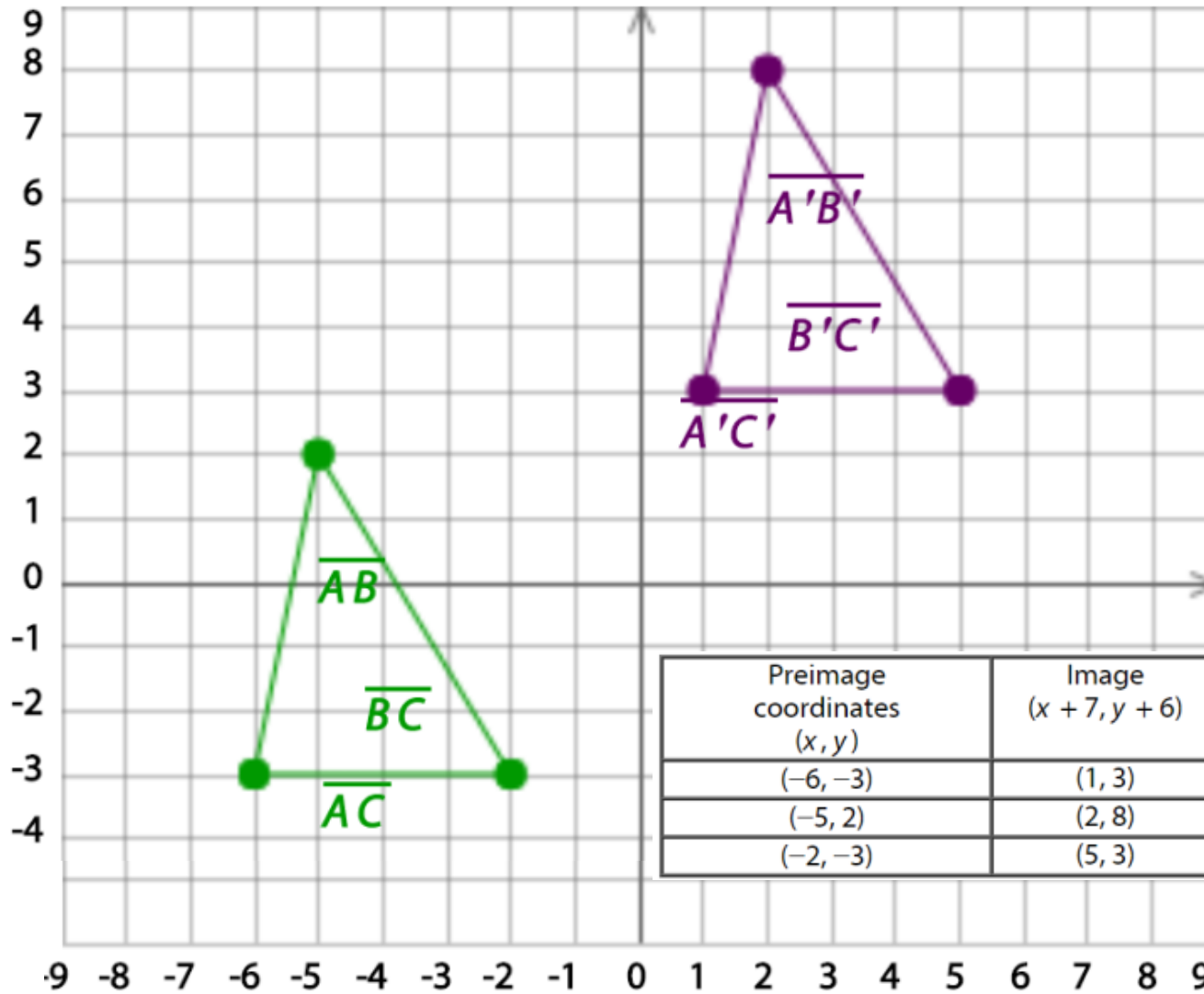
Triangle with coordinates: $P(1, -3)$, $Q(1, -5)$, $R(4, -5)$.



5

Draw the preimage and image of the triangle under a translation along $\langle 7, 6 \rangle$.

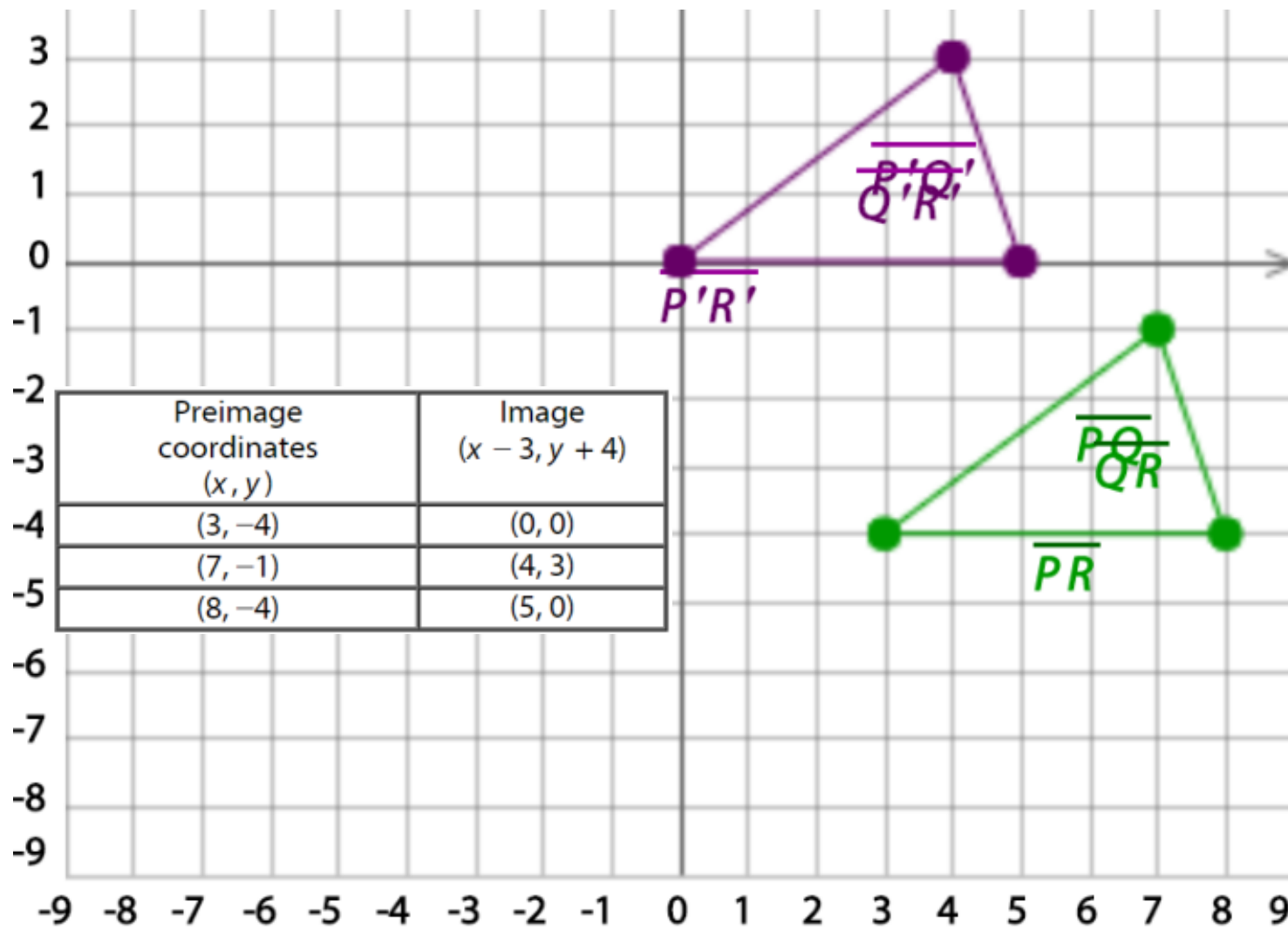
Triangle with coordinates: $A(-6, -3)$, $B(-5, 2)$, $C(-2, -3)$.



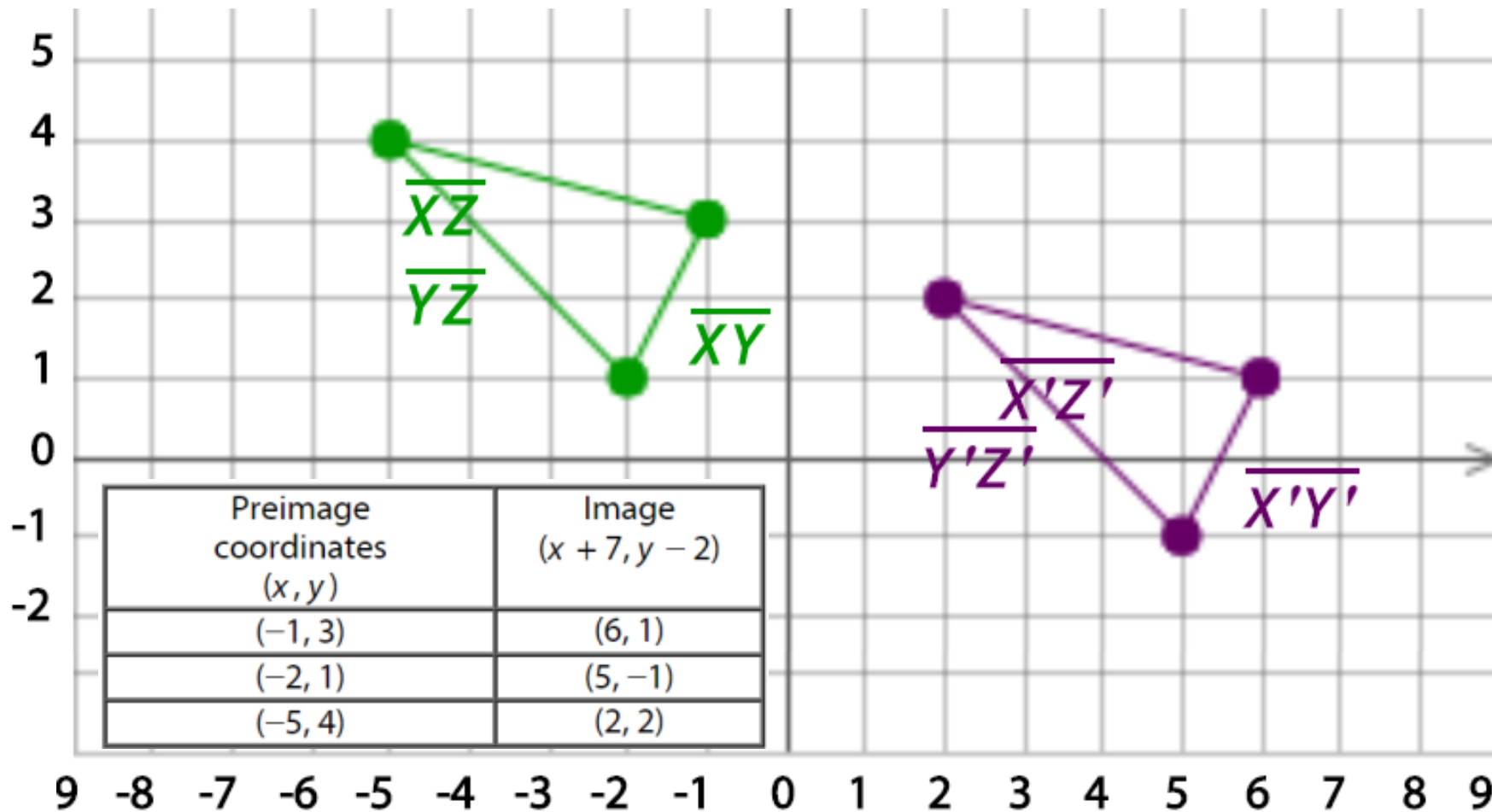
6

Draw the preimage and image of the triangle under a translation along $\langle -3, 4 \rangle$.

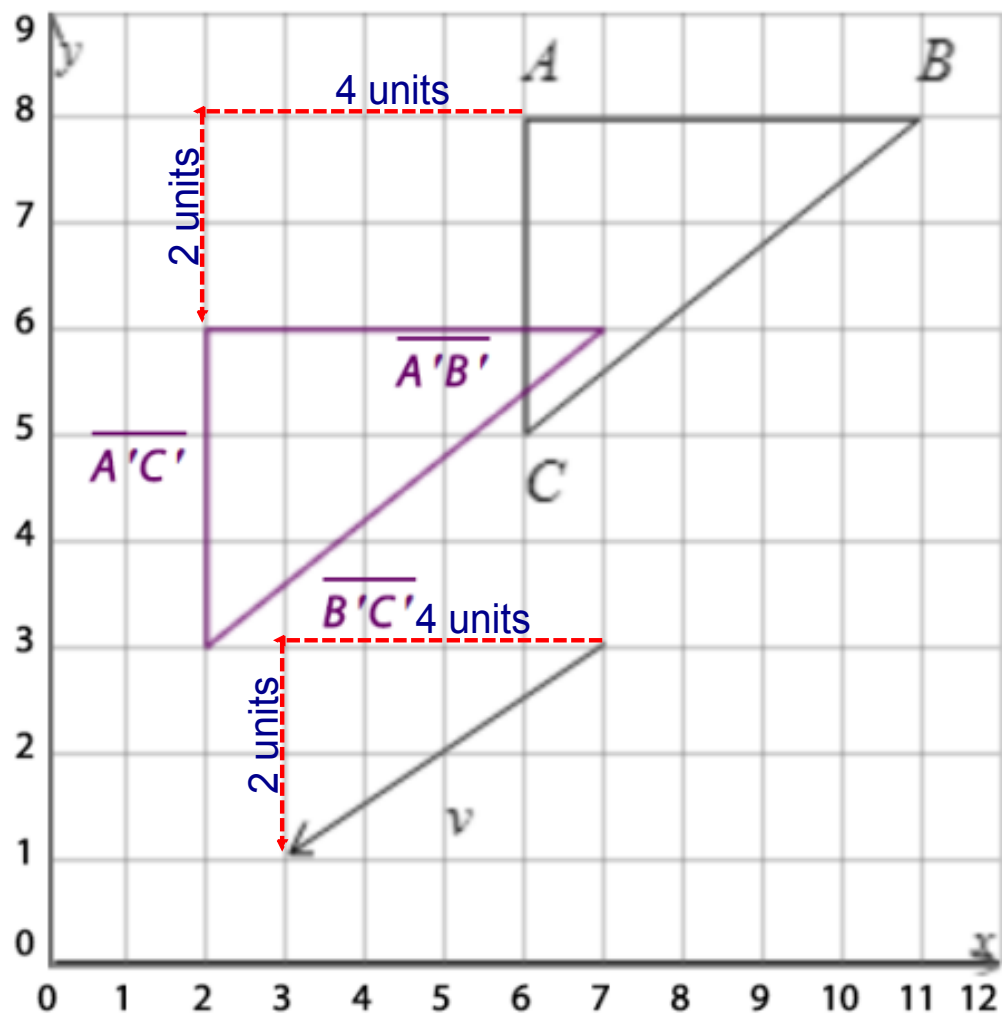
Triangle with coordinates: $P(3, -4)$, $Q(7, -1)$, $R(8, -4)$.

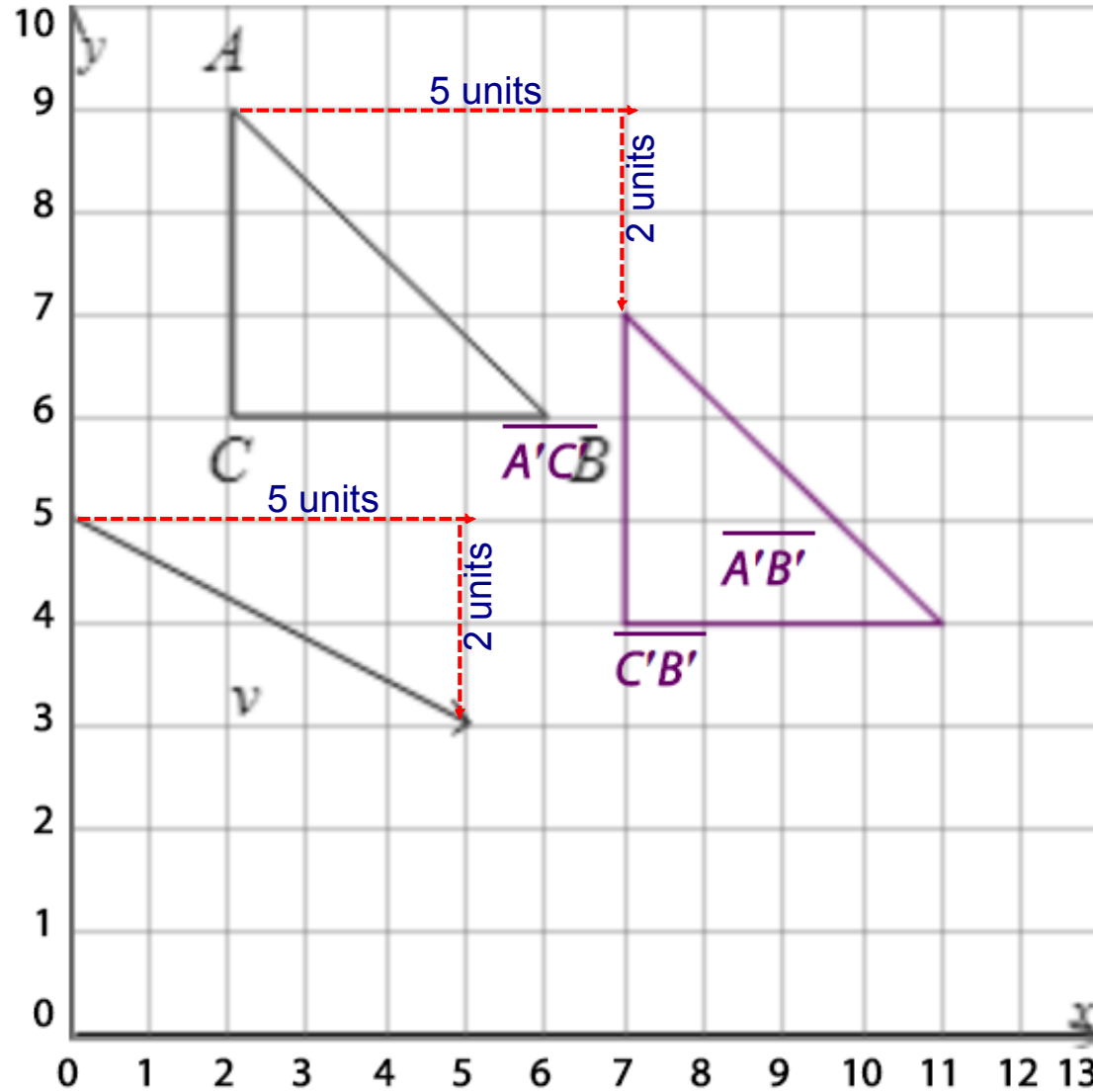


7

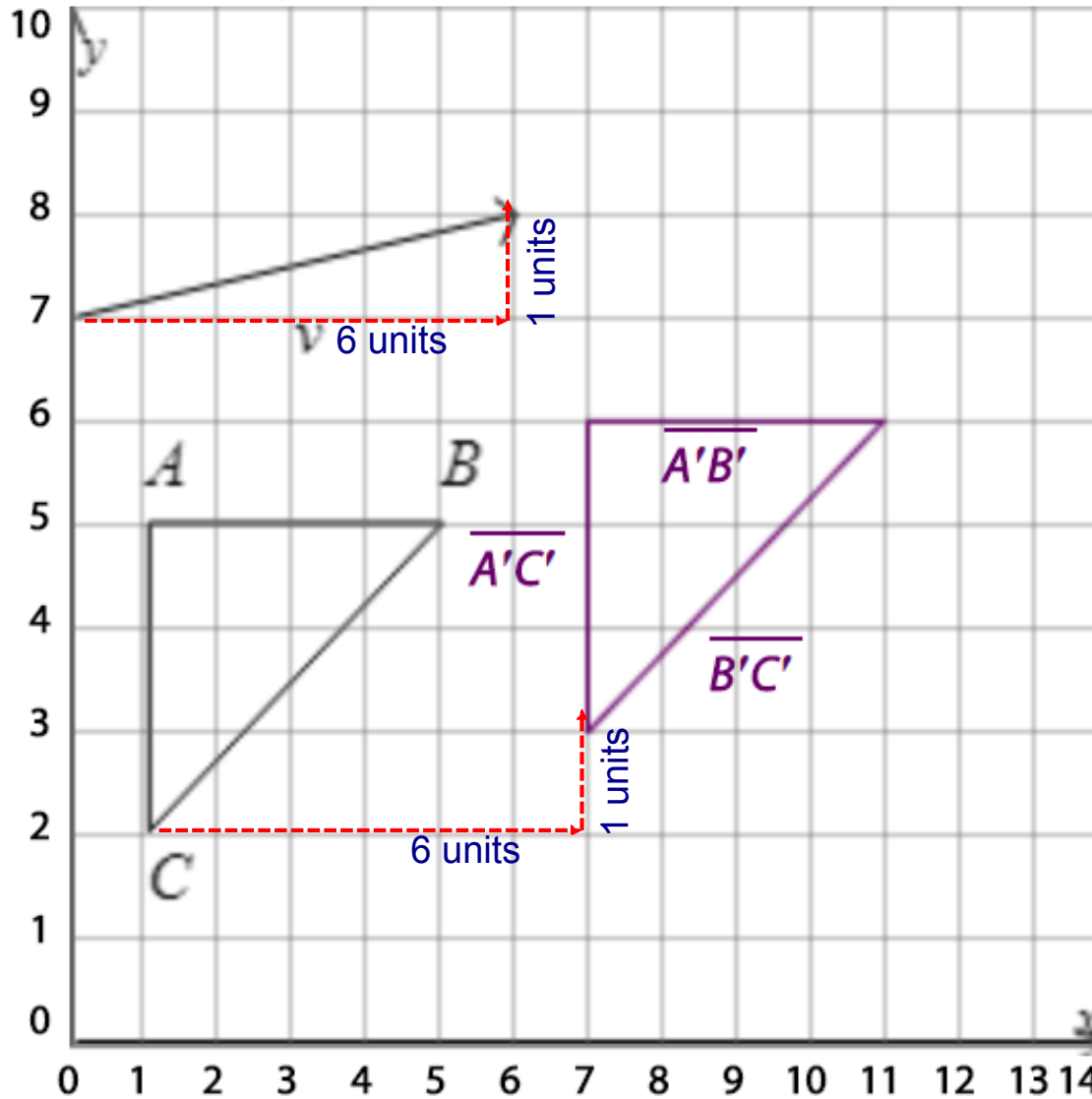
Draw the preimage and image of the triangle under a translation along $\langle 7, -2 \rangle$.Triangle with coordinates: $X(-1, 3)$, $Y(-2, 1)$, $Z(-5, 4)$.

8 Draw the image of $\triangle ABC$ after a translation along vector v .



9Draw the image of $\triangle ABC$ after a translation along vector v .

10 Draw the image of $\triangle ABC$ after a translation along vector v .





Never say,
"I can't"
Always say,
"I'll try"