

**Quick Concept:** The isometric transformations are reflections, rotations and translations. Some of the non-isometric transformations are dilations, stretches and distortions.

1) Use the coordinate rule to determine the image. (a) Plot the image; (b) Determine whether it is an isometric transformation or not and (c) Determine which transformation was performed.

a) PRE-IMAGE  $\triangle ABC$

$A(-3, 1)$

$B(-4, 3)$

$C(0, 5)$

COORDINATE RULE

$W(x, y) \rightarrow (x-1, y-5)$

TRANSFORMATION TYPE?

IMAGE  $\triangle A'B'C'$

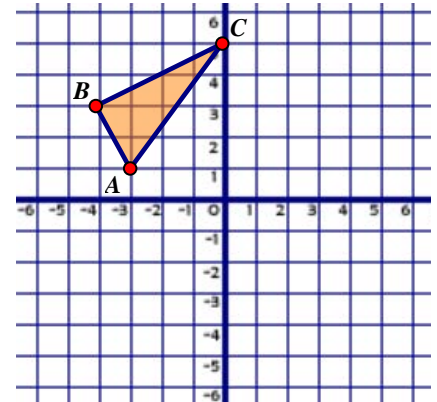
$A'(\underline{\quad}, \underline{\quad})$

$B'(\underline{\quad}, \underline{\quad})$

$C'(\underline{\quad}, \underline{\quad})$

ISOMETRY? YES / NO

\_\_\_\_\_



b) PRE-IMAGE  $\triangle ABC$

$A(1, -1)$

$B(3, 3)$

$C(4, -2)$

COORDINATE RULE

$W(x, y) \rightarrow (-x, y)$

TRANSFORMATION TYPE?

IMAGE  $\triangle A'B'C'$

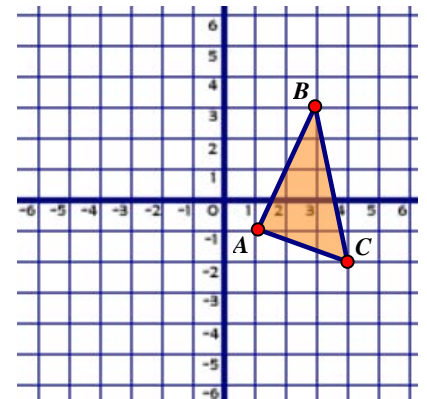
$A'(\underline{\quad}, \underline{\quad})$

$B'(\underline{\quad}, \underline{\quad})$

$C'(\underline{\quad}, \underline{\quad})$

ISOMETRY? YES / NO

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c) PRE-IMAGE  $\triangle ABC$

$A(0, -4)$

$B(4, 0)$

$C(2, -4)$

COORDINATE RULE

$W(x, y) \rightarrow (y, x)$

TRANSFORMATION TYPE?

IMAGE  $\triangle A'B'C'$

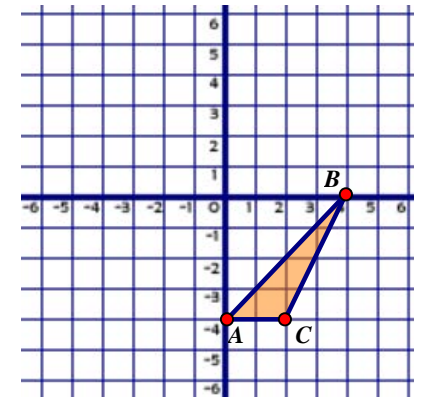
$A'(\underline{\quad}, \underline{\quad})$

$B'(\underline{\quad}, \underline{\quad})$

$C'(\underline{\quad}, \underline{\quad})$

ISOMETRY? YES / NO

\_\_\_\_\_





d) PRE-IMAGE  $\triangle ABC$

$A(-1, -2)$

$B(1, 2)$

$C(2, -3)$

COORDINATE RULE

$W(x, y) \rightarrow (2x, y)$

TRANSFORMATION TYPE?

IMAGE  $\triangle A'B'C'$

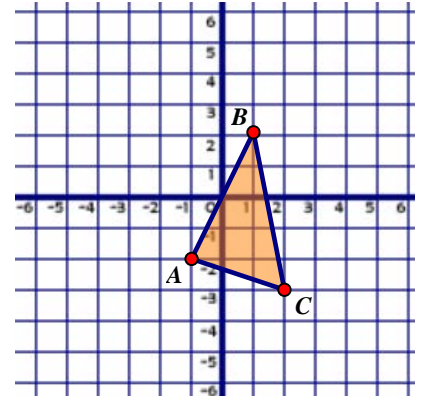
$A'(\underline{\quad}, \underline{\quad})$

$B'(\underline{\quad}, \underline{\quad})$

$C'(\underline{\quad}, \underline{\quad})$

ISOMETRY? YES / NO

\_\_\_\_\_



e) PRE-IMAGE  $\triangle ABC$

$A(-2, -1)$

$B(0, 3)$

$C(2, 0)$

COORDINATE RULE

$W(x, y) \rightarrow (2x, 2y)$

TRANSFORMATION TYPE?

IMAGE  $\triangle A'B'C'$

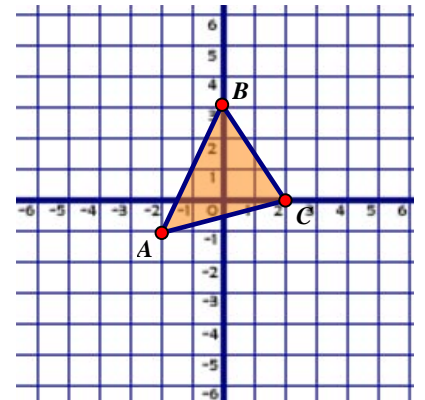
$A'(\underline{\quad}, \underline{\quad})$

$B'(\underline{\quad}, \underline{\quad})$

$C'(\underline{\quad}, \underline{\quad})$

ISOMETRY? YES / NO

\_\_\_\_\_



f) PRE-IMAGE  $\triangle ABC$

$A(1, -1)$

$B(3, 3)$

$C(4, -2)$

COORDINATE RULE

$W(x, y) \rightarrow (-y, x)$

TRANSFORMATION TYPE?

IMAGE  $\triangle A'B'C'$

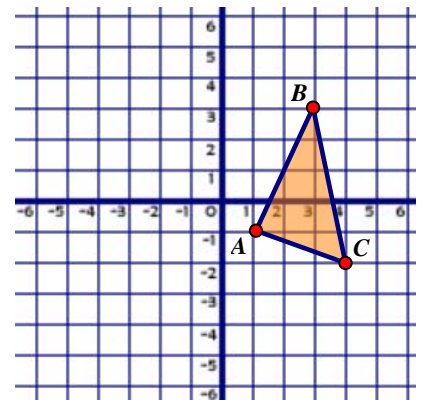
$A'(\underline{\quad}, \underline{\quad})$

$B'(\underline{\quad}, \underline{\quad})$

$C'(\underline{\quad}, \underline{\quad})$

ISOMETRY? YES / NO

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**g) PRE-IMAGE  $\triangle ABC$**

**$A(0, -4)$**

**$B(4, 0)$**

**$C(2, -4)$**

**COORDINATE RULE**

**$W(x, y) \rightarrow (x + y, y)$**

**TRANSFORMATION TYPE?**

**IMAGE  $\triangle A'B'C'$**

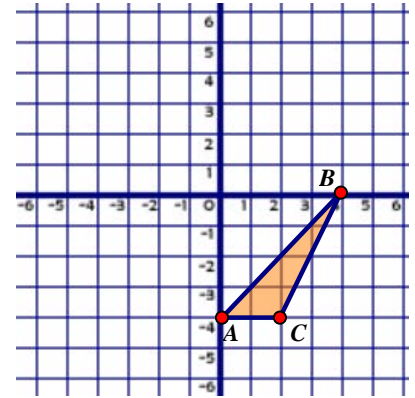
**$A'(\underline{\quad}, \underline{\quad})$**

**$B'(\underline{\quad}, \underline{\quad})$**

**$C'(\underline{\quad}, \underline{\quad})$**

**ISOMETRY? YES / NO**

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**h) PRE-IMAGE  $\triangle ABC$**

**$A(1, -1)$**

**$B(3, 3)$**

**$C(4, -2)$**

**COORDINATE RULE**

**$W(x, y) \rightarrow (-x, -y)$**

**TRANSFORMATION TYPE?**

**IMAGE  $\triangle A'B'C'$**

**$A'(\underline{\quad}, \underline{\quad})$**

**$B'(\underline{\quad}, \underline{\quad})$**

**$C'(\underline{\quad}, \underline{\quad})$**

**ISOMETRY? YES OR NO**

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