

Notes - Day 2 Triangle Transformation

Date _____ Period _____

1) Transformations:

Translation:

Rule:

Reflection:

Rule:

Rotation:

Rule:

Dilation:

Rule:

Given the pre-image and the new image, write a rule to describe each transformation.

Translation:

$$\begin{array}{l} 2) I(-3, -3), H(-2, 0), G(1, -2) \\ \quad \text{to} \\ I'(-5, -3), H'(-4, 0), G'(-1, -2) \end{array}$$

$$\begin{array}{l} 3) E(-4, -1), D(-2, 0), C(-4, -4) \\ \quad \text{to} \\ E'(-3, 4), D'(-1, 5), C'(-3, 1) \end{array}$$

$$\begin{array}{l} 4) N(-4, -3), M(-1, 0), L(-2, -4) \\ \quad \text{to} \\ N'(-3, -4), M'(0, -1), L'(-1, -5) \end{array}$$

$$\begin{array}{l} 5) F(1, 4), G(1, 5), H(4, 4) \\ \quad \text{to} \\ F'(-1, 2), G'(-1, 3), H'(2, 2) \end{array}$$

Reflection:

$$\begin{array}{l} 6) U(1, 4), T(5, 5), S(1, 2) \\ \quad \text{to} \\ T'(5, -5), S'(1, -2), U'(1, -4) \end{array}$$

$$\begin{array}{l} 7) W(-3, -2), X(-1, -1), Y(-2, -3) \\ \quad \text{to} \\ X'(-1, 1), Y'(-2, 3), W'(-3, 2) \end{array}$$

$$\begin{array}{l} 8) L(-5, 2), K(-5, 4), J(-2, 5) \\ \quad \text{to} \\ K'(-5, -4), J'(-2, -5), L'(-5, -2) \end{array}$$

$$\begin{array}{l} 9) S(0, -5), T(3, -1), U(3, -4) \\ \quad \text{to} \\ T'(3, 1), U'(3, 4), S'(0, 5) \end{array}$$

Rotation:

$$\begin{array}{l} 10) R(3, -3), S(4, -3), T(4, -5) \\ \quad \text{to} \\ R'(-3, 3), S'(-4, 3), T'(-4, 5) \end{array}$$

$$\begin{array}{l} 11) T(3, -3), U(3, -1), V(5, -3) \\ \quad \text{to} \\ T'(-3, 3), U'(-3, 1), V'(-5, 3) \end{array}$$

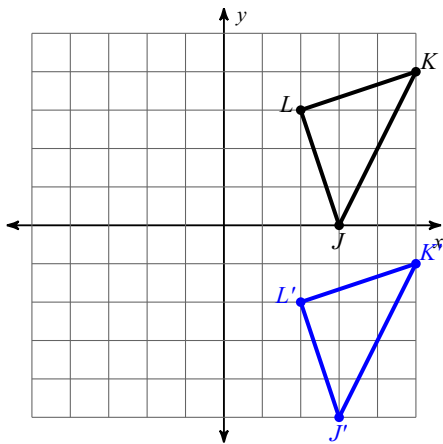
$$\begin{array}{l} 12) N(0, 1), M(3, 5), L(4, 0) \\ \quad \text{to} \\ N'(0, -1), M'(-3, -5), L'(-4, 0) \end{array}$$

$$\begin{array}{l} 13) T(-3, -1), U(1, 0), V(1, -3) \\ \quad \text{to} \\ T'(3, 1), U'(-1, 0), V'(-1, 3) \end{array}$$

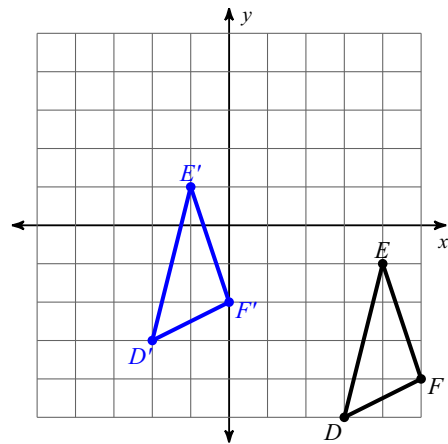
Given the pre-image and the new image, write a rule to describe each transformation.

Translation:

14)

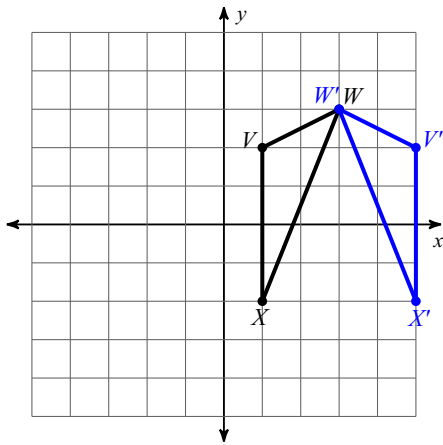


15)

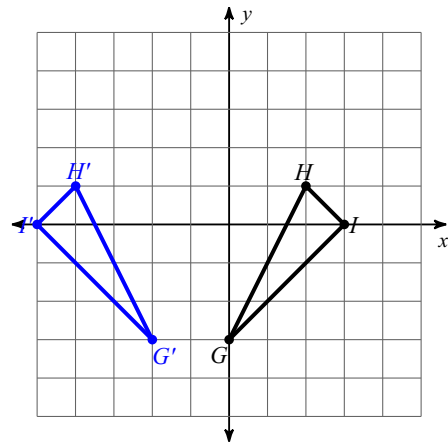


Reflection:

16)

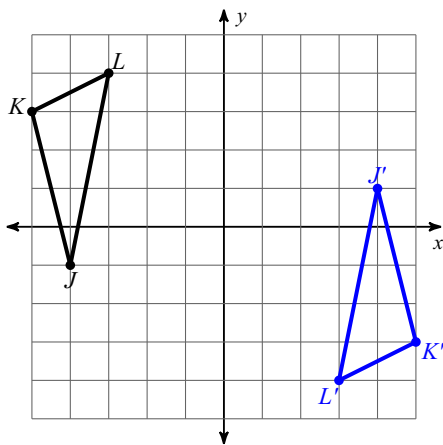


17)

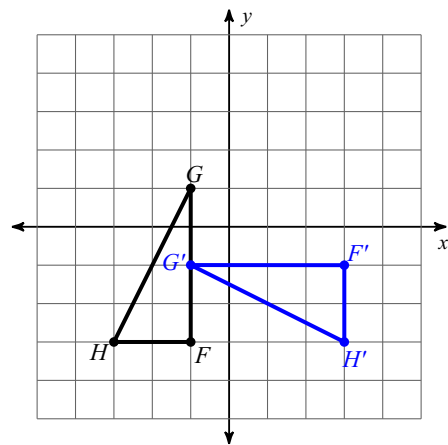


Rotation:

18)

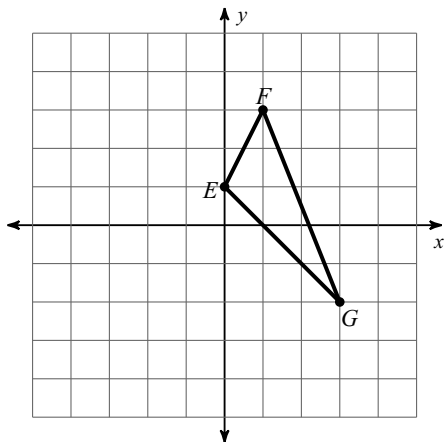


19)

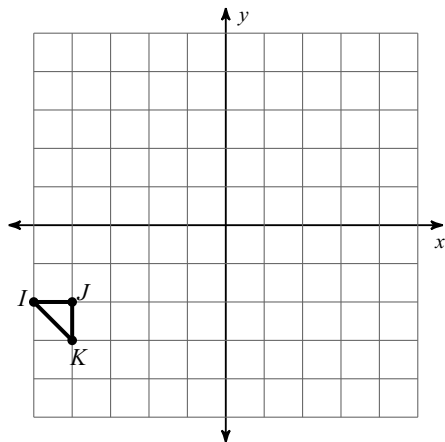


Given the pre-image and rule, graph the image of the figure using the transformation given.

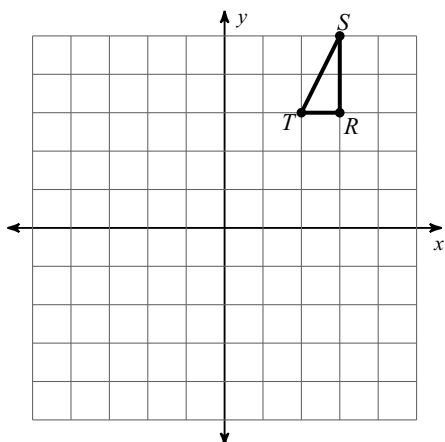
20) translation: 1 unit left and 2 units up



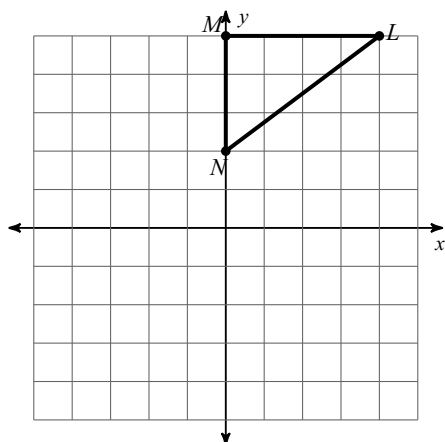
21) translation: 6 units right and 3 units up



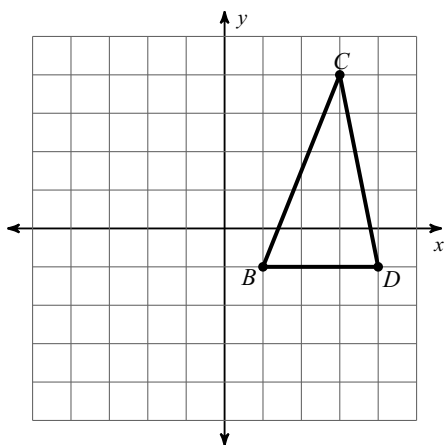
22) reflection across $y = 2$



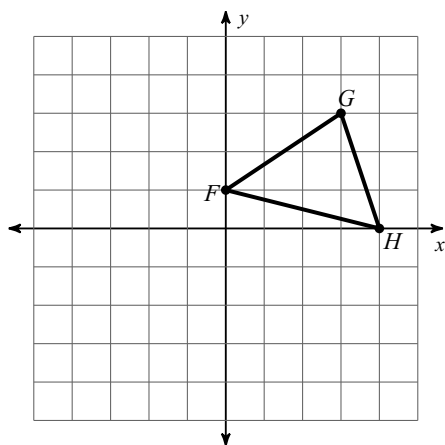
23) reflection across $x = 1$



24) rotation 180° about the origin

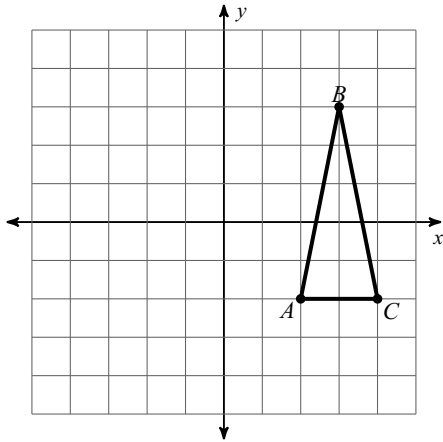


25) rotation 180° about the origin

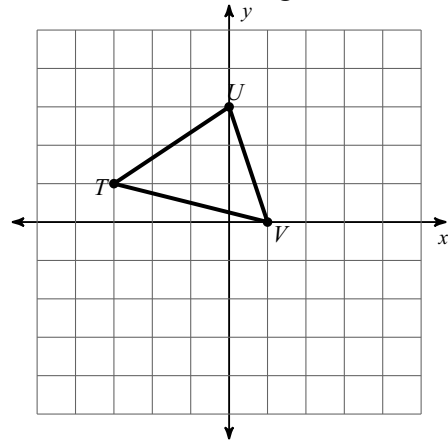


Given the pre-image and the new image, Find the coordinates of the vertices of each figure after the given transformation.

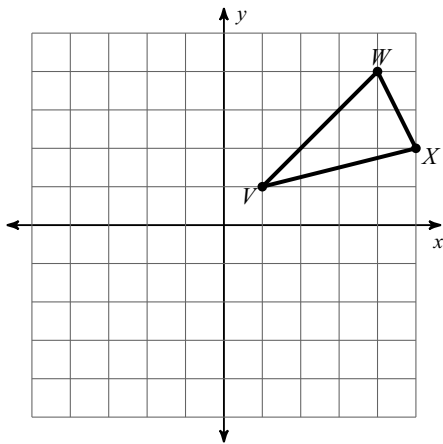
26) translation: 3 units left and 2 units up



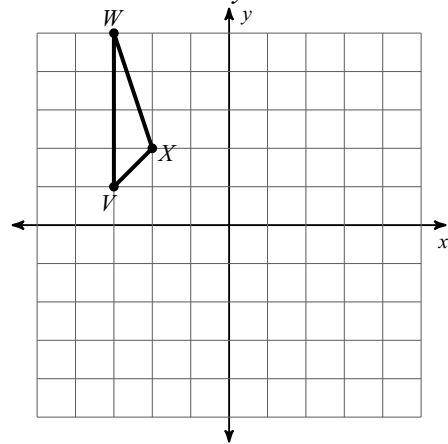
27) translation: 4 units right and 2 units down



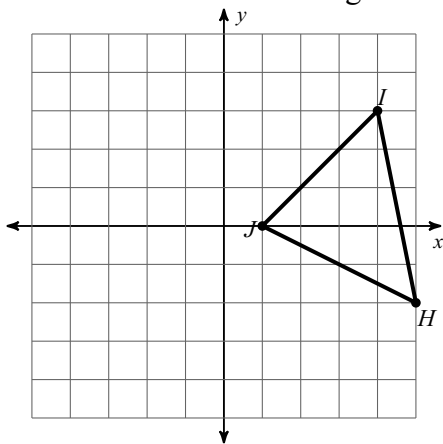
28) reflection across $x = 3$



29) reflection across $y = 3$



30) rotation 180° about the origin



31) rotation 180° about the origin

