

Name Key Hour _____

Transformations Unit 3 Review

TRANSLATIONS

1. What is the image of $(-4, 6)$ after the translation $(x, y) \rightarrow (x - 5, y - 2)$?

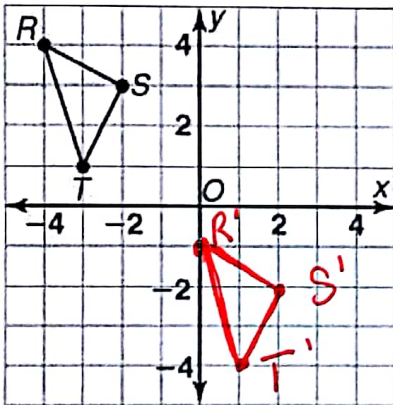
$-4 - 5 \quad 6 - 2$
 $-9, 4$

$(-9, 4)$

2. What is a rule to describe the translation of left 2 and up 5?

$(x, y) \rightarrow (x - 2, y + 5)$

3. Translate $\triangle RST$ 4 units right & 5 unit down. Label the image $\triangle R'S'T'$.



REFLECTIONS

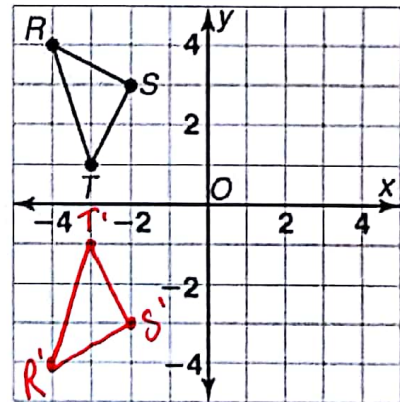
5. What is the image of $(-1, -3)$ after the reflection across the x-axis?

$(-1, 3)$

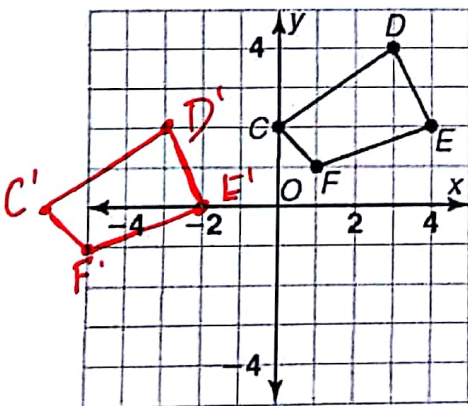
6. Which is a rule to describe the reflection over the y axis?

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

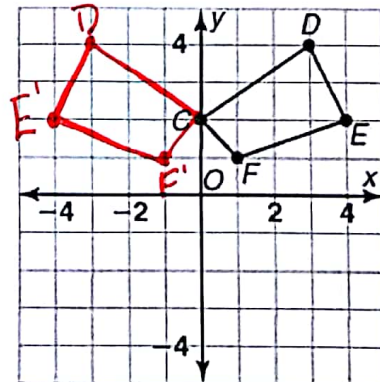
7. Reflect $\triangle RST$ over the x-axis. Label the image $\triangle R'S'T'$.



4. Translate CDEF 6 units left & 2 units down. Label the image $C'D'E'F'$.



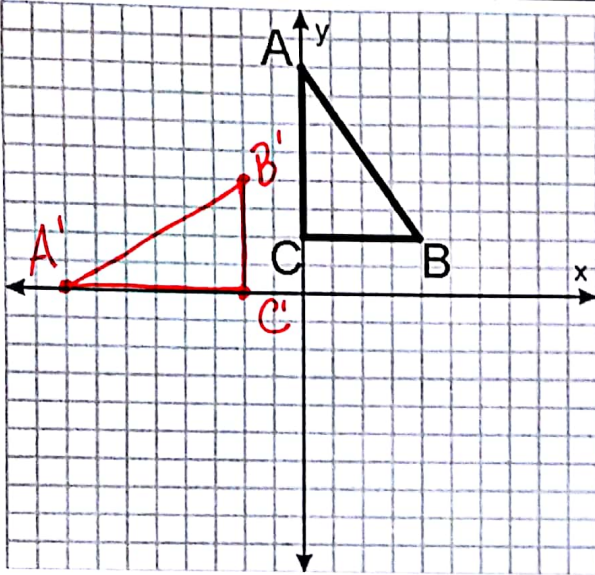
8. Reflect CDEF over the y-axis. Label the image $C'D'E'F'$.



ROTATIONS

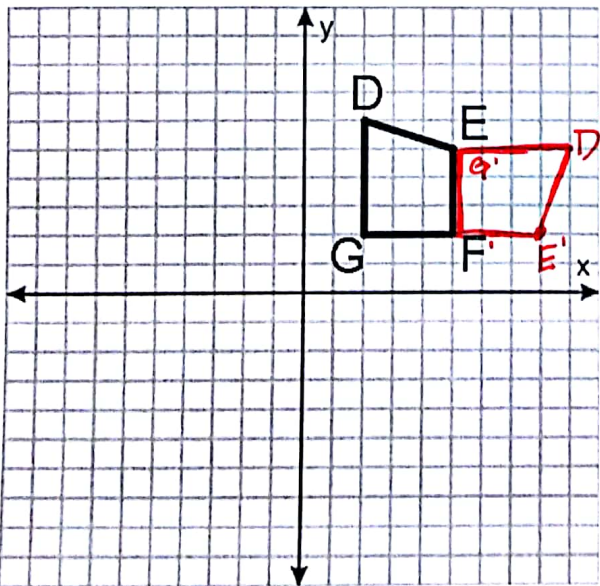
9. Rotate $\triangle ABC$ 90° counter clockwise (CCW) around the *origin*.
Label the *image* $A'B'C'$.

Write the coordinates for the *image*.
 $A'(-8, 0)$ $B'(-2, 4)$ $C'(-2, 0)$



10. Rotate figure ABC 90° clockwise (CW) around *Point F*.
Label the *image* $D'E'F'G'$.

Write the coordinates for the new figure.
 $D'(9, 5)$ $E'(8, 2)$
 $F'(5, 2)$ $G'(5, 5)$



DILATIONS

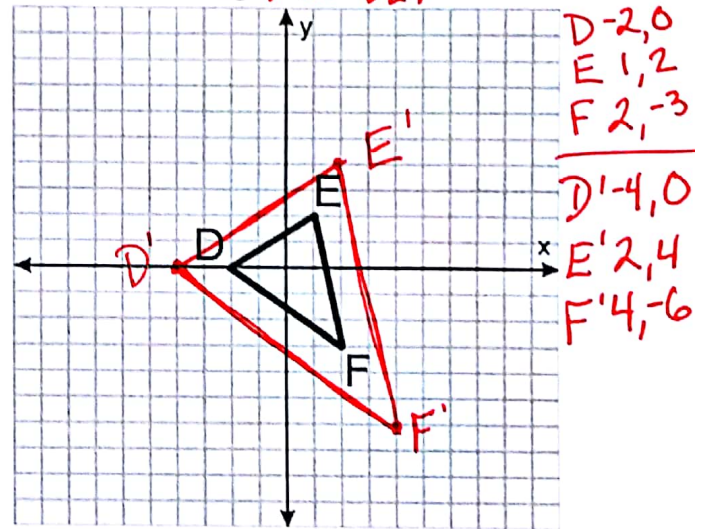
11. What is the *image* of $(3, 5)$ after the dilation with scale factor of $n = 2$?

$$(3, 5) \xrightarrow{\times 2} (6, 10)$$

12. Which is a rule to describe a dilation with a scale factor of $n = 1/3$?

$$(x, y) \rightarrow \left(\frac{1}{3}x, \frac{1}{3}y \right)$$

13. Perform a dilation on the figure with a scale factor of $n = 2$.
Label the *image* DEF' .



14. Perform a dilation on the figure with a scale factor of $n = 1/2$.
Label the *image* $A'B'C'$.

