

Name: Key 18-19 Hr: _____

Math 8 - Unit 3 PreTest - Transformations

_____/ 34 points

1. (2 points) What is the image of (2, 3) after the translation $(x, y) \rightarrow (x - 5, y - 2)$?

$(-3, 1)$

$2-5 \quad 3-2$

2. (2 points) Which is a rule to describe the translation of left 3 and down 4?

$(x, y) \Rightarrow (x-3, y-4)$

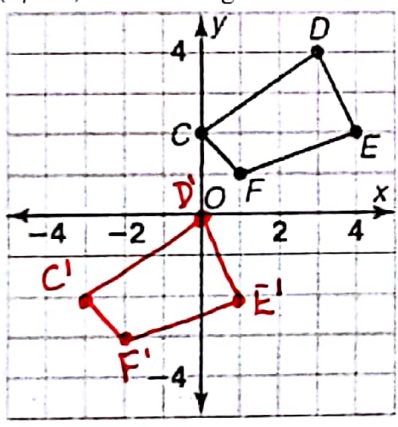
3. (2 points) What is the image of (2, 3) after the reflection across the x-axis?

$(2, -3)$

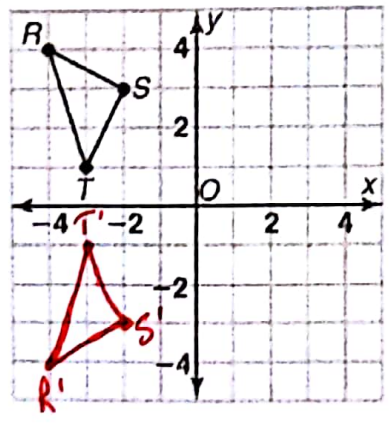
4. (2 points) Which is a rule to describe the reflection over the y-axis?

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

5. (3 points) Translate figure CDEF 3 units left and 4 units down (2 points). Label the new figure C'D'E'F' (1 point).



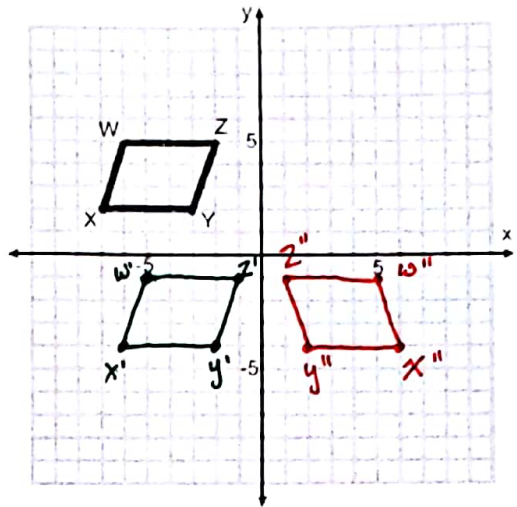
6. (3 points) Reflect figure RST over the x-axis (2 point). Label the new figure R'S'T' (1 point).



7. (4 points) Perform the series of transformations on rectangle WXYZ.

A (2 points) Translate figure WXYZ so that:
 $(x, y) \rightarrow (x + 1, y - 6)$
 Label it $W'X'Y'Z'$. $\rightarrow 1 \downarrow 6$

B (2 points) Reflect $W'X'Y'Z'$ over the y-axis.
 $(x, y) \rightarrow (-x, y)$
 Label it $W''X''Y''Z''$.

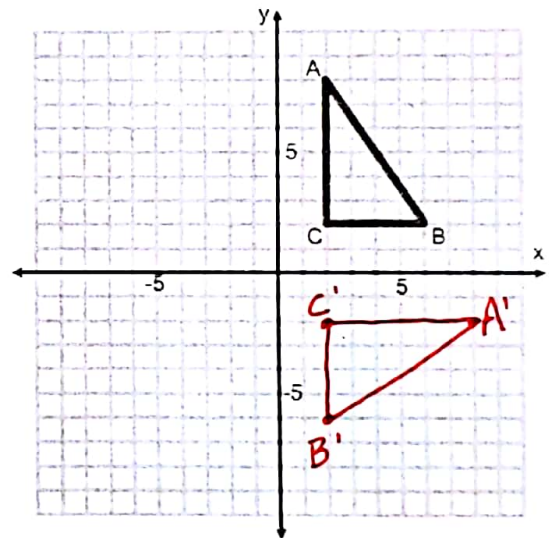


You should have drawn two more quadrilaterals.

8. (3 points) Rotate the figure ABC 90° clockwise (to the right) around the origin (1 point).
 Label the new figure $A'B'C'$ (1 point).

Write the coordinates for the new figure. (1 point)

$A' (8, -2)$
 $B' (2, -6)$
 $C' (2, -2)$



You should have drawn one more triangle.

9. (2 points) What is the *image* of (4, 6) after the dilation with scale factor 2?

$(8, 12)$

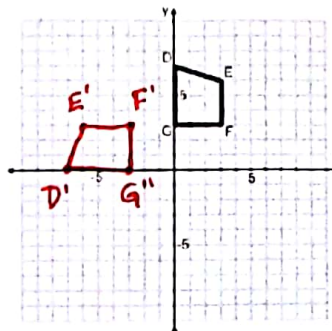
10. (2 points) Write a rule to describe a dilation of $n = \frac{1}{4}$?

$(x, y) \Rightarrow (\frac{1}{4}x, \frac{1}{4}y)$

11. (3 points) Rotate the figure DEFG 90° counter-clockwise (to the left) around the origin (1 point).
Label the new figure D'E'F'G' (1 point).

Write the coordinates for the new figure (1 point).

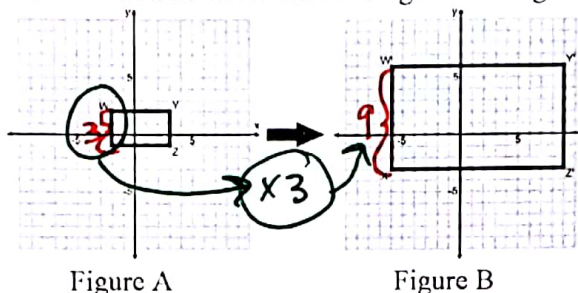
D' (-7, 0) E' (-6, 3)
F' (-3, 3) G' (-3, 0)



You should have drawn one more quadrilateral.

12. (1 point) What is the scale factor for the dilation that transforms figure A to figure B?

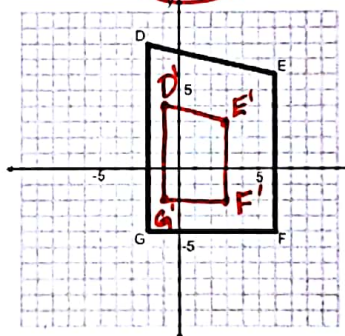
$n = 3$



13. (3 points) Perform a dilation on the figure with a scale factor of $n = 1/2$. (1 point)

D (-2, 8) D' (-1, 4)
E (6, 6) E' (3, 3)
F (6, -4) F' (3, -2)
G (-2, -4) G' (-1, -2)

(1 point) (1 point)



(1 point)

14. (2 points) Which statement describes the relationship between rectangle ABCD and its image?
Circle one of the options.

<p>A. •Translated 4 units to the left. •Dilated by a scale factor of 2. •Similar.</p>	<p>B. •Rotated 180° about point C. •Dilated by a scale factor of 2. •Similar.</p>
<p>C. •Dilated by a scale factor of 2. •Reflected over the y-axis. •Similar.</p>	<p>D. •Reflected over the x-axis. •Dilated by a scale factor of 2. •Similar.</p>

