Transformations Unit Review Name _____

1. Point A is located at (4, -7). The point is reflected in the x-axis. Where is its image located?

2. The endpoints of $\overline{AB}$ are $A(3,2)$ and $B(7,1)$. If $\overline{A''B''}$ is the result of the transformation of $\overline{AB}$ under $D_2 \circ T_{-4,3}$ what are the coordinates of A" and B"?

3. Which transformation can map the letter **S** onto itself?

(1) glide reflection (3) line reflection

(2) translation (4) rotation

4. What is the image of point (-3,9) after the composition of transformations defined by $R_{90°} \circ r_{y=x}$?

5. Which transformation is not always an isometry?

(1) dilation (3) line reflection

(2) translation (4) rotation

6. Point C is located at (3, 8). The point is reflected over the line $x = 6$. Where is its image located?

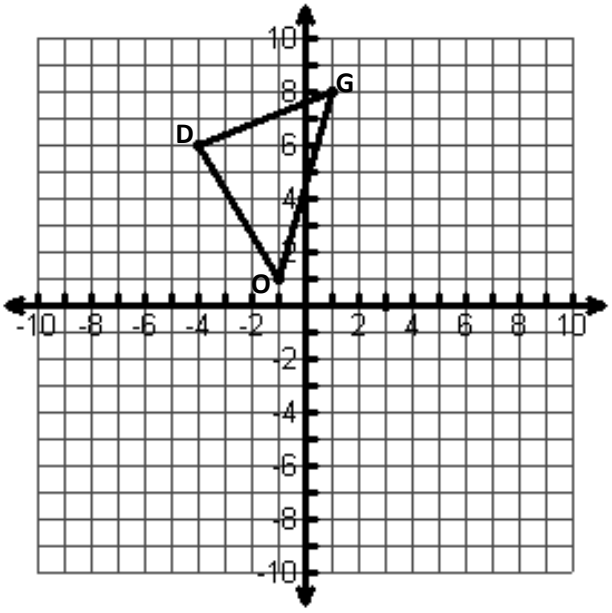
7. When ΔABC is dilated by a scale factor of 2, its image is $\Delta A'B'C'$. Which statement is true?

1) $\overline{AC} \cong \overline{A'C'}$ 3) perimeter of ΔABC = perimeter of $\Delta A'B'C'$

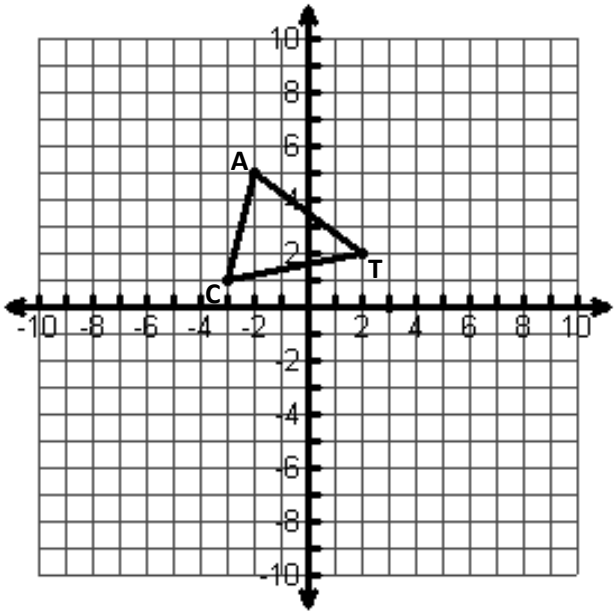
2) $\angle A \cong \angle A'$ 4) 2(area of ΔABC) = area of $\Delta A'B'C'$

8. Point M is located at (4, 7). The point is reflected over the $x-axis$ and then reflected over the $y-axis$. Where is its image located? Name a single transformation that would map point M to its image?

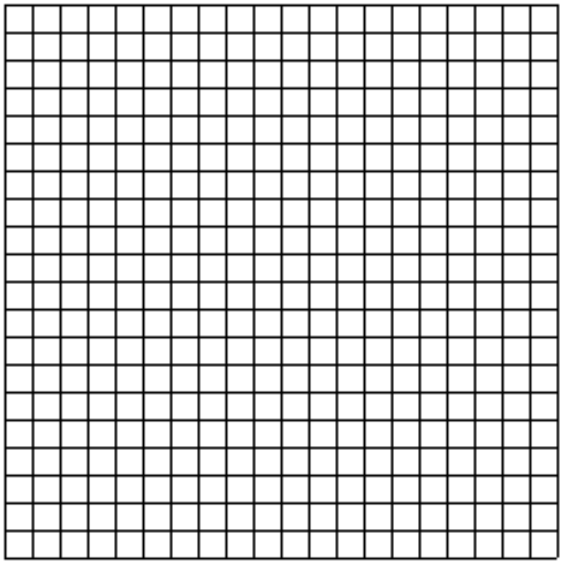
9. Graph and state the coordinates of ΔDOG after it is rotated -270°.



10. Graph and state the coordinates of ΔCAT after $r_{y=-2}$



11. On the accompanying grid, graph and label ΔABC with vertices $A(3,1)$, $B(0,4)$, and $C(-5,3)$. On the same grid, graph and label $\Delta A''B''C''$, the image of ABC after the transformation $r_{x-axis} \circ r_{y=x}$.



a. Circle all that apply to $\Delta A''B''C''$, the image of ABC.

Preserves Length	Preserves Angle Measure	Preserves Orientation	Isometry

b. Would it matter if the order of the reflections changed to $r_{y=x} \circ r_{x-axis}$? Prove by finding $\Delta A''B''C''$ under this composite transformation.