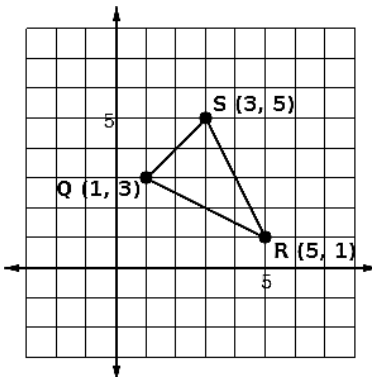
Transformations **Name:_____Period:_____Date:_____**

1. ΔQRS is translated four units to the left and two units up. Which ordered pair is a vertex of the translated image? (GCO.2)



A) $(-1, 3)$ B) $(1, -3)$ C) $(1, 3)$ D) $(3, 1)$

2. The coordinates of ΔJRB are $J(1, -2)$, $R(-3, 6)$ and $B(4, 5)$. What are the coordinates of the vertices of its image after the composition transformation reflected over the y- axis then translated (x,y) → (x + 2, y – 1)? (GCO.5)

A) $J(3, 1)$, $R(-1, -7)$, $B(6, -6)$ B) $J(3, -3)$, $R(-1, 5)$, $B(6, 4)$

C) $J(1, -3)$, $R(5, 5)$, $B(-2, 4)$ D) $J(-1, -2)$, $R(3, 6)$, $B(-4, 5)$

3. The vertices of parallelogram $ABCD$ are $A(2, 0)$, $B(0, -3)$, $C(3, -3)$, and $D(5, 0)$. If $ABCD$ is reflected over the x −axis, how many vertices remain the same? (GCO.3)

A) 0 B) 1 C) 2 D) 3

4. Point P' is the image of point P after a counterclockwise rotation of $90°$ about the origin. If the coordinates of point P' are $(-7, 3)$, what are the coordinates of point P? (GCO.3)

A) $(-3, -7)$ B) $(-3, 7)$ C) $(3, -7)$ D) $(3, 7)$

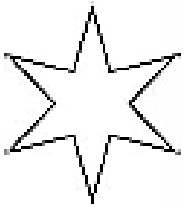
5. Triangle ABC has coordinates $A(3, 0)$, $B(3, 8)$ and $C(6, 6)$. If ΔABC is reflected over the line $y = x$, which statement is true about the image of ΔABC? (GCO.5)

A) One point remains fixed. B) The size of the triangle changes.

C) The orientation does not change. D) One side of ΔABC is parallel to the line $y = x$.

Directions: Determine whether the figure has line, point, and/or rotational symmetry.

6.

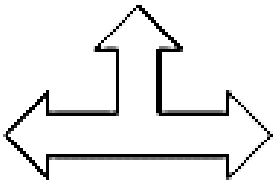


- ❑ Line
- ❑ Point
- ❑ Rotational
- ❑ None

7.

- ❑ Line
- ❑ Point
- ❑ Rotational
- ❑ None

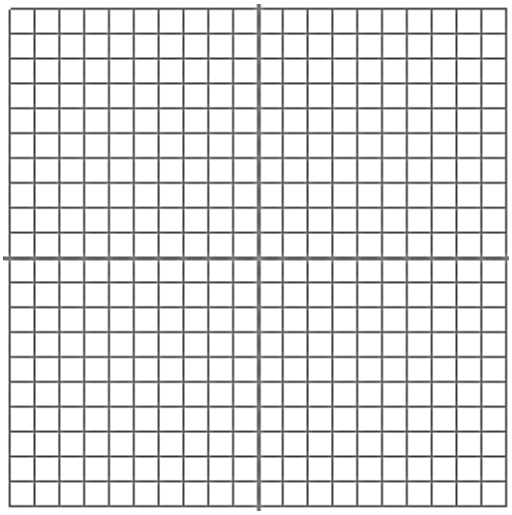
8.



- ❑ Line
- ❑ Point
- ❑ Rotational
- ❑ None

Directions: Graph and label each figure and its image under the given counterclockwise rotation about the origin. Give the new coordinates.

9. Triangle *XYZ* with vertices *X*(4, -1), *Y*(8, -2), and *Z*(1, -8): **180°**



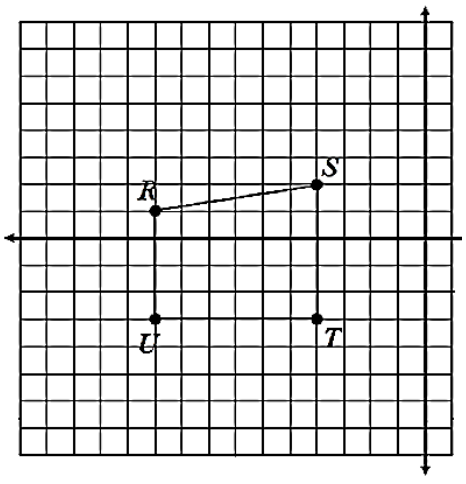
X' (____, ____)

Y' (____, ____)

Z' (____, ____)

Directions: Graph and label each figure and its image under the given dilation. Give the new coordinates

10. Graph the image of the trapezoid below using a scale factor of ***k* = 3/2.**



R' (____, ____)

S' (____, ____)

T' (____, ____)

U' (____, ____)