Name: Gabor Szita 9/10 Per: 1

Transformations Quiz

1. Which of the following properties of a figure is not preserved under a reflection?
   A. Angle measure
   B. Collinearity
   C. Orientation
   D. Distance

2. What transformation is described by the notation:
   $(x, y) \rightarrow (x, -y)$?
   A. Translation left 1 unit
   B. Translation down 1 unit
   C. Reflection across the x-axis
   D. Reflection across the y-axis

3. What transformation is described by the notation:
   $(x, y) \rightarrow (x + 4, y)$?
   A. Translation left 4 units
   B. Translation down 4 units
   C. Translation right 4 units
   D. Translation up 4 units

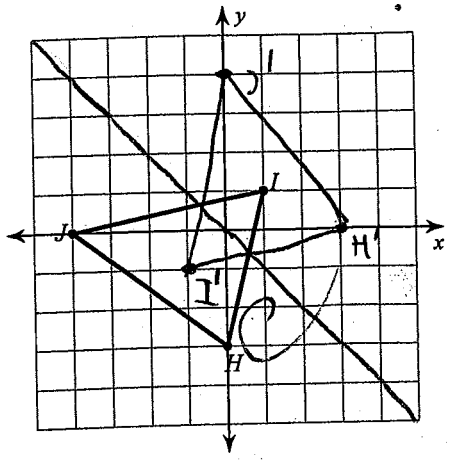
4. A translation vector is given by $< 6,2 >$.
   a. Find the image of point $P = (-3,1)$ under the translation. (3, 3)
   b. Find the preimage of the point (a, b) under the translation. (a - 6, b - 2)

5. If a point P lies on line m, then what is the image of point P when it is reflected across line m? P, it'll be the same point ($P' = P$)

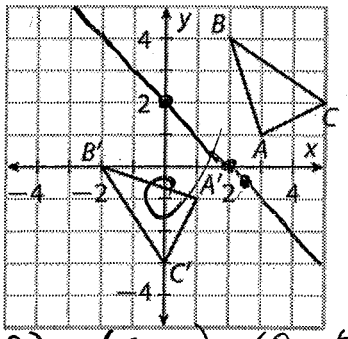
6. Point A (-3, 5) in the coordinate plane is rotated 270° clockwise about the origin. What are the coordinates of its image?
   $(x, y) \rightarrow (-y, x) \Rightarrow (-3, 5) \rightarrow (-5, -3)$

7. Explain what it means for a transformation to be a rigid motion.
   That the figure after transformation will look the same, it is corresponding to the original figure
   the figure's image

8) reflection across $y = -x$

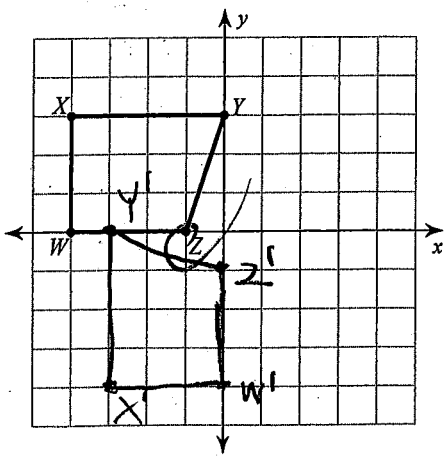


9. In the figure below, $\triangle A'B'C'$ is the result of reflecting $\triangle ABC$ across a line. Find three points on the line of reflection and sketch the line on the figure.



(0, 2) ; (2, 0) ; (2.5, −0.5)

10) rotation 90° counterclockwise about the origin



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

$X(-4, 3) \rightarrow (-3, -4)$

$Y(0, 3) \rightarrow (-3, 0)$

$W(-5, 0) \rightarrow (0, -5)$

$Z(-1, 0) \rightarrow (0, -1)$