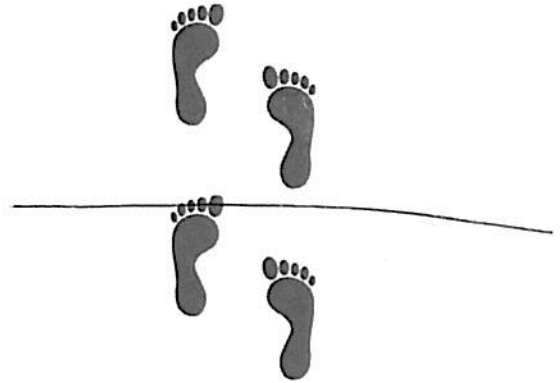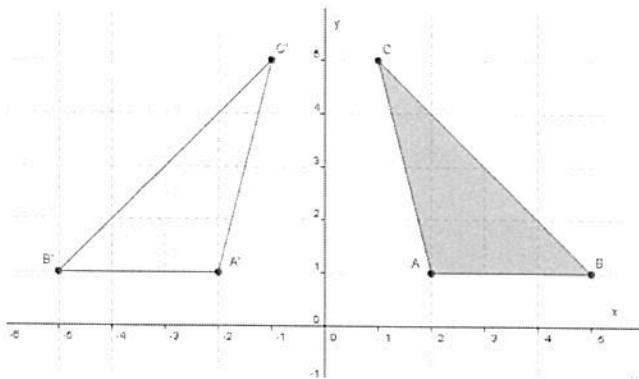# Transformations Test
Multiple Choice (1 point each)
*Directions:* Circle the correct response for each question. Make sure your answer is clearly marked.

1. Which of these describes the transformation of the triangle?
   a. Reflection over the x-axis
   b. Reflection over the y-axis
   c. Rotation of 90° clockwise about the origin
   d. Rotation of 180° clockwise about the origin

2. Which transformation will result in an image which is similar, **_but not congruent_**, to the pre-image?
   f. dilation
   g. glide reflection
   h. rotation
   j. translation

3. Which of these transformations describe the footprints shown above?
   a. dilation
   b. ~~glide reflection~~ rotation
   c. reflection
   d. rotation

4. A figure is located **_entirely_** in the third quadrant. If it is reflected over the y-axis, in which quadrant will its image lie?
   f. first
   g. second
   h. third
   j. fourth
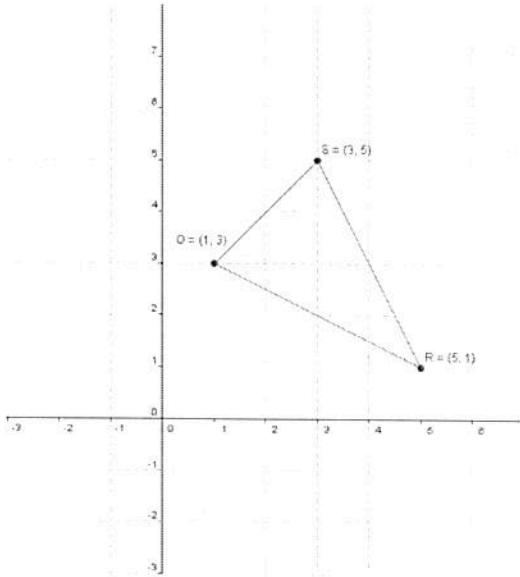
5. Triangle QRS is translated four units to the left and two units up. Which ordered pair is a vertex of the translated image?

 a. (-1,3)
 b. (1,-3)
 c. (1,3)
 d. (3,1)

6. Which of these can transformations occurs when the fan blades turn?

 f. dilation
 g. reflection
 h. rotation
 j. translation
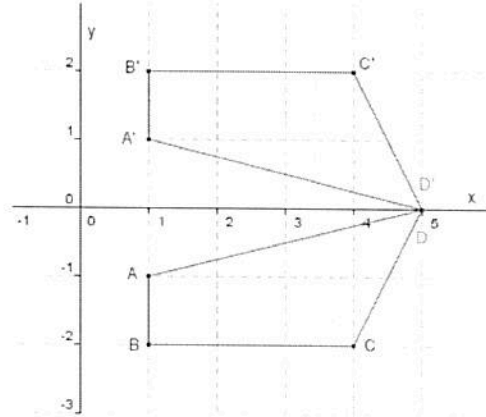
7. Which of the following describes the transformation shown here?

 a. dilation with a scale factor of 2
 b. rotation of 90º counterclockwise
 c. reflection over the x-axis
 d. translation up 2 units

8. Triangle JKL has vertices J(2,4), K(3,1), and L(3,3). A translation maps the point J to J'(3,3). What are the coordinates of K'?

 f. (-3,1)
 g. (2,2)
 h. (3,2)
 j. (4,0)

9. The marching band enters the gym and marches across the gym **_without_** turning. Which of these describes the transformation?

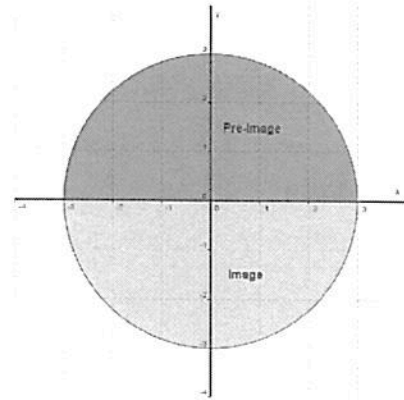 a. dilation
 b. reflection
 c. rotation
 d. translation

10. Which of the following transformations has the same result as a rotation of 90º clockwise?
   f. dilation of scale factor of 9
   g. reflection about a horizontal line
   h. rotation of 270º counterclockwise
   j. translation down and to the right

11. Which transformation best describes the image of an object viewed through a microscope?
   a. dilation
   b. reflection
   c. rotation
   d. translation

12. Which of the following describes the movement of a figure that is translated according to the rule below?
   $$(x, y) \rightarrow (x - 7, y + 1)$$
   f. down 7 units and right 1 unit
   g. left 7 units and up 1 unit
   h. right 7 units and down 1 unit
   j. up 7 units and left 1 unit

13. Which of these transformations could produce the image shown?
   a. dilation
   b. glide reflection
   c. rotation
   d. translation

14. A rectangular photo with dimensions of 1.5 inches wide by 2 inches long is enlarged to a length of 8 inches. What is the width of the enlarged print?
   f. 4 inches
   g. 6 inches
   h. 8 inches
   j. 10 inches

Name: _____ **Date:** _____

## Geometric Transformations Multiple Choice Test Bank

15 A triangle has vertices at A (1, 3), B (4, 2), and C (3, 8). Which transformation would produce an image with vertices $A'(3, -1)$, $B'(2, -4)$, $C'(8, -3)$?
[G.CO.2, G.CO.4, G.CO.5]

a. a reflection over the x-axis

b. a reflection over the y-axis

c. a rotation 90° clockwise

d. a rotation 90° counterclockwise

16 A triangle has vertices at F (–7, 3), G (2, 6), and H (3, 5). What are the coordinates of each vertex if the triangle is reflected over the x axis?
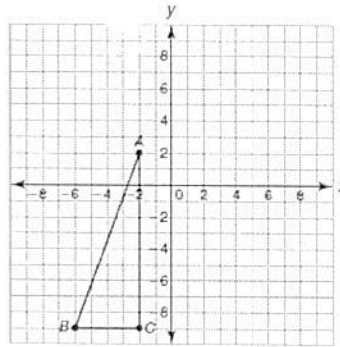[G.CO.2, G.CO.4, G.CO.5]

a. $F'(-7, -3)$, $G'(2, -6)$, $H'(3, -5)$

b. $F'(7, -3)$, $G'(-2, -6)$, $H'(-3, -5)$

c. $F'(7, 3)$, $G'(-2, 6)$, $H'(-3, 5)$

d. $F'(-7, 3)$, $G'(-2, 6)$, $H'(-3, -5)$

17 Describe the transformation done on $\triangle RTS$ to form $\triangle VXW$.
[G.CO.2, G.CO.4, G.CO.5]
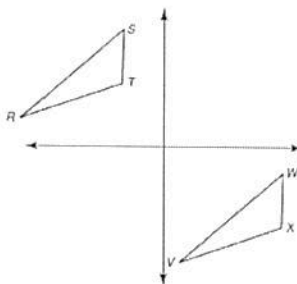
a. rotation around the origin 180°

b. reflection over the x-axis

c. reflection over the y-axis

d. translation

18 Which transformation would produce an image with vertices $A'(-2, -2)$, $B'(9, -6)$, $C'(9, -2)$?
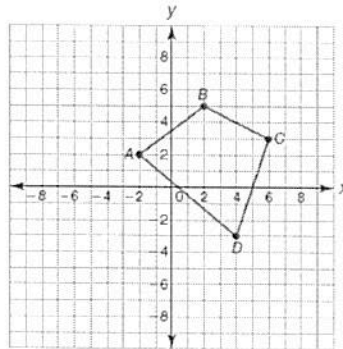**[G.CO.2, G.CO.4, G.CO.5]**

    a.   a reflection over the x-axis

    b.   a reflection over the y-axis

    c.   a rotation 90° clockwise

    d.   a rotation 90° counterclockwise

19 What transformation was perfomed on $\triangle TNZ$ to form $\triangle CRM$?
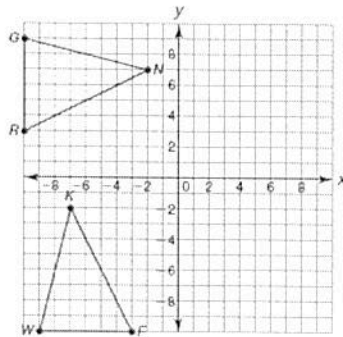**[G.CO.2, G.CO.4, G.CO.5]**
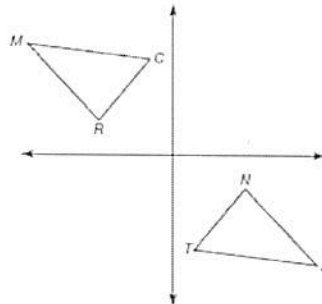
    a.   reflection over the x-axis

    b.   reflection over the y-axis

    c.   rotation about the origin 90° counterclockwise

    d.   rotation about the origin 180°

20 What are the coordinates of each vertex if the figure is rotated 90° counterclockwise about the origin?
[G.CO.2, G.CO.4, G.CO.5]

a. $A'(-2, 2), B'(-5, -2), C'(-3, -6), D'(3, -4)$

b. $A'(2, -2), B'(5, 2), C'(3, 6), D'(-3, 4)$

c. $A'(-2, -2), B'(-5, 2), C'(-3, 6), D'(3, 4)$

d. $A'(2, 2), B'(5, -2), C'(3, -6), D'(-3, -4)$

21 Describe the transformation done on $\triangle FKW$ to form $\triangle RNG$.
[G.CO.2, G.CO.4, G.CO.5]

a. rotation about the origin 90° counterclockwise

b. rotation about the origin 90° clockwise

c. reflection over the x-axis

d. translation 5 units right and 9 units up

22 A triangle has vertices at $A(-3, -1)$, $B(-6, -5)$, $C(-1, -4)$. Which transformation would produce an image with vertices $A'(3, -1)$, $B'(6, -5)$, $C'(1, -4)$?
[G.CO.2, G.CO.4, G.CO.5]

    a.   a reflection over the x-axis

    b.   a reflection over the y-axis

    c.   a rotation 90° clockwise

    d.   a rotation 90° counterclockwise

23 A triangle has vertices at $A(-7, 6)$, $B(4, 9)$, $C(-2, -3)$. What are the coordinates of each vertex if the triangle is translated 4 units right and 6 units down?
[G.CO.2, G.CO.4, G.CO.5]

    a. $A'(-11, 12)$, $B'(0, 15)$, $C'(-6, 3)$

    b. $A'(-11, 0)$, $B'(0, 3)$, $C'(-6, -9)$

    c. $A'(-3, 12)$, $B'(8, 15)$, $C'(2, 3)$
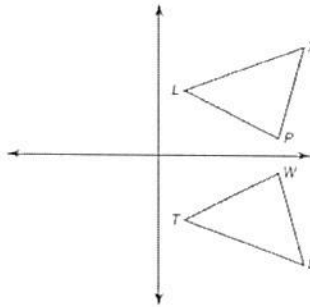
    d. $A'(-3, 0)$, $B'(8, 3)$, $C'(2, -9)$

24 What are the coordinates of each vertex if the figure is rotated 180° clockwise about the origin?
[G.CO.2, G.CO.4, G.CO.5]
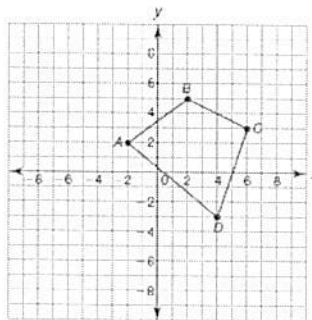
    a. $A'(-2, -2)$, $B'(-5, 2)$, $C'(-3, 6)$, $D'(3, 4)$

    b. $A'(2, -2)$, $B'(-2, -5)$, $C'(-6, -3)$, $D'(-4, 3)$

    c. $A'(-2, -2)$, $B'(2, -5)$, $C'(6, -3)$, $D'(4, 3)$

    d. $A'(2, 2)$, $B'(-2, 5)$, $C'(-6, 3)$, $D'(-4, -3)$
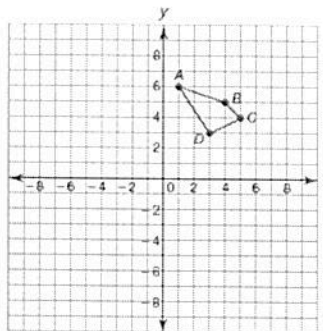
25. In this figure, △XPL was formed by what transformation on △DWT?
    [G.CO.2, G.CO.4, G.CO.5]

a. rotation about the origin 180°

b. rotation about the origin 90° clockwise

c. reflection over the x-axis

d. rotation about the origin 90° counterclockwise

26. What are the coordinates of each vertex if the figure is reflected over the y-axis?
    [G.CO.2, G.CO.4, G.CO.5]

a. $A'(6, -1)$, $B'(-5, 4)$, $C'(-4, 5)$, $D'(-3, 3)$

b. $A'(-1, 6)$, $B'(-4, 5)$, $C'(-5, 4)$, $D'(-3, 3)$

c. $A'(-1, -6)$, $B'(-5, -4)$, $C'(-4, -5)$, $D'(-3, -3)$

d. $A'(-6, 1)$, $B'(-5, 4)$, $C'(-4, 5)$, $D'(3, -3)$