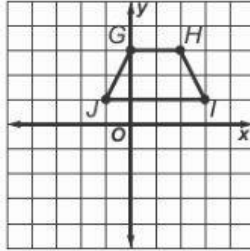


**Test, Form 2A**

SCORE \_\_\_\_\_

Write the letter for the correct answer in the blank at the right of each question.

For Exercises 1-4, trapezoid  $GHIJ$  has vertices as shown.



1. If the figure is translated 3 units left and 4 units down, what are the coordinates of  $G'$ ?

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

1. \_\_\_\_\_

2. If the figure is rotated  $90^\circ$  clockwise about the origin, what are the coordinates of  $H'$ ?

F.  $(-3, 2)$                       H.  $(2, -3)$   
 G.  $(3, -2)$                       I.  $(-3, -2)$

2. \_\_\_\_\_

3. If the figure is reflected over the  $y$ -axis, what are the coordinates of  $I'$ ?

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

3. \_\_\_\_\_

4. After a transformation, the coordinates of  $J'$  are  $(0, -1)$ . Which of the following best represents the transformation?

F. a reflection over the  $y$ -axis  
 G. a translation of 1 unit right and 2 units down  
 H. a  $90^\circ$  clockwise rotation about the origin  
 I. a dilation with a scale factor of 2

4. \_\_\_\_\_

5. The ordered pair  $R(-2, 7)$  is translated 5 units to the right and down 2 units. Which of the following describes the translation using translation notation?

A.  $(x - 2, y + 5)$                       C.  $(x - 5, y + 2)$   
 B.  $(x + 2, y - 5)$                       D.  $(x + 5, y - 2)$

5. \_\_\_\_\_

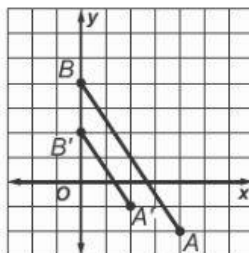
6. Which type of transformation enlarges or reduces a figure?

F. dilation                      H. rotation  
 G. reflection                      I. translation

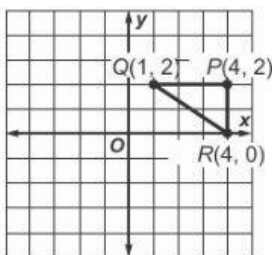
6. \_\_\_\_\_

**Test, Form 2A** (continued)

SCORE \_\_\_\_\_

For Exercises 7 and 8, segment  $A'B'$  is a dilation of segment  $AB$ .

7. What is the scale factor of the dilation? 7. \_\_\_\_\_
8. Classify the dilation as an enlargement or a reduction. 8. \_\_\_\_\_
9. Triangle  $FGH$  has vertices  $F(3, -1)$ ,  $G(5, -1)$ , and  $H(5, 2)$ . What are the coordinates of the image of point  $H$  after a translation 1 unit to the right and 3 units down? 9. \_\_\_\_\_
10. Quadrilateral  $JKLM$  has vertices  $J(-4, 4)$ ,  $K(-4, 1)$ ,  $L(1, 1)$ , and  $M(1, 4)$ . What are the coordinates of the image of point  $K$  after a reflection across the  $x$ -axis? 10. \_\_\_\_\_
11. What are the coordinates of the image of point  $P$  after  $\triangle PQR$  is rotated  $90^\circ$  counterclockwise about point  $Q$ ? 11. \_\_\_\_\_



12. Triangle  $ABC$  has vertices  $A(0, 4)$ ,  $B(-1, 4)$ , and  $C(0, -3)$ . What are the coordinates of the image of point  $A$  after a dilation with a scale factor of 2? 12. \_\_\_\_\_