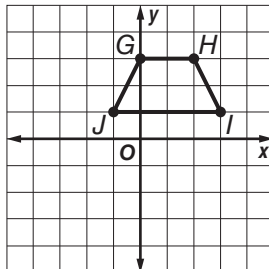


Test, Form 2A

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. **B**

2. If the figure is rotated 90° clockwise about the origin, what are the coordinates of H' ?

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

2. **G**

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. **D**

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
 G. a 90° clockwise rotation about the origin
 I. a dilation with a scale factor of 2

4. **G**

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. **D**

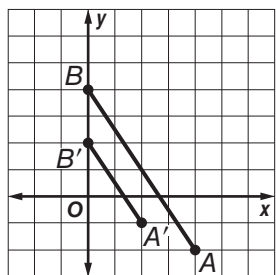
6. Which type of transformation enlarges or reduces a figure?

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

6. **F**

Test, Form 2A (continued)

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



7. What is the scale factor of the dilation?

7. $\frac{1}{2}$

8. Classify the dilation as an enlargement or a reduction.

8. reduction

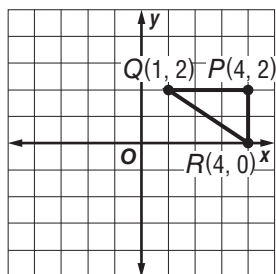
9. Triangle FGH has vertices $F(3, -1)$, $G(5, -1)$, and $H(5, 2)$. What are the coordinates of the image of point H after a translation 1 unit to the right and 3 units down?

9. $H'(6, -1)$

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. $K'(-4, -1)$

11. What are the coordinates of the image of point P after $\triangle PQR$ is rotated 90° counterclockwise about point Q ?



11. $P'(1, 5)$

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. $A'(0, 8)$