Transformation Test

Name: _____   Date: _____

Part 1 – Vocabulary. Match the definition with the correct vocabulary word. (5 points each)

1. Name the transformation that <u>turns</u> the shape around a center point.
2. Name the transformation that <u>slides</u> the shape in any direction.
3. Name the transformation that <u>enlarges or reduces</u> the size of an object.
4. Name the transformation that <u>flips</u> the object over a line (as in a mirror image).
5. Turning the opposite way that the hour or minute hand goes around a clock (to the left).
6. The moved or changed object
7. Turning the same way that the hour or minute hand goes around a clock (to the right).
8. Part of the original figure that matches up with a part of the image (i.e. A and A').
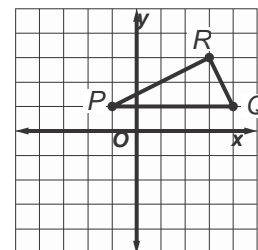
> **VOCABULARY WORDS**
>
> *For #1-4*
> A. Dilation
> B. Reflection
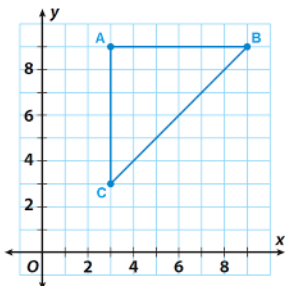> C. Rotation
> D. Translation
>
> *For #5-8*
> A. image
> B. corresponding
> C. clockwise
> D. counterclockwise

Part 2 – *Use the following picture for questions 9-12 (6 points ea.)*

9. If the figure is translated 6 units down and 3 left, what are the coordinates of R'?
    A. (0, -3)   B. (1, 1)   C. (-4, 1)   D. (0, 3)

10. If the figure is dilated using a scale factor of 3, what are the coordinates of R'?
    A.   (3, 3)   B. (6, 6)   C. (9, 3)   D. (9, 9)

11. If the figure is reflected over the y-axis, what are the coordinates of P'?
    A.   (-1, 1)   B. (1, 1)   C. (-1, -1)   D. (1, -1)

12. If the figure is rotated 180°, what are the coordinates of Q'?
    A.   (-4, -1)   B. (-1, 4)   C. (1, -4)   D. (4, 1)

Use the triangle below for #13 - 14

13. If the triangle is dilated by ⅓, what is A'?
    A. (1, 1)   B. (1, 3)   C. (3, 3)   D. (3, 9)

14. If the triangle is dilated by 3, what is C'?
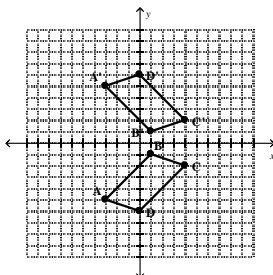   A. (3, 3)   B. (3, 9)   C. (9, 3)   D. (9, 9)
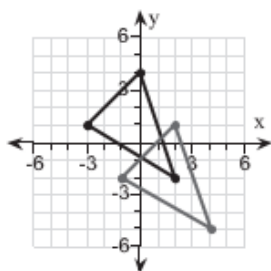
Name: _____   Date: _____

Part 3 – Identifying Transformations

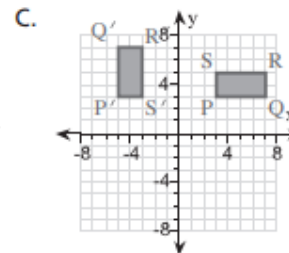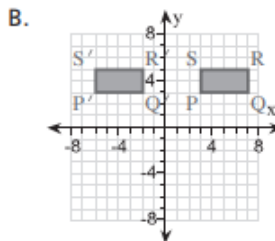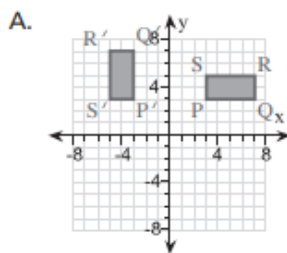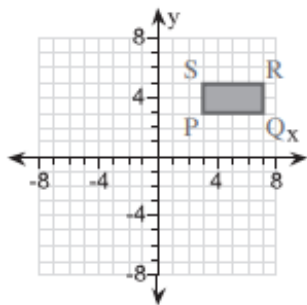15. The figure below represents which type of transformation.

    A. Translation up 10 units.
    B. Rotation of 180 degrees.
    C. Reflection across the y-axis
    D. Reflection across the x-axis

16. Which is the correct rule for the translation?

    A. $(x,y) \rightarrow (x - 3, y + 2)$

    B. $(x,y) \rightarrow (x + 2, y)$

    C. $(x,y) \rightarrow (x, y - 3)$

    D. $(x,y) \rightarrow (x + 2, y - 3)$

17. Which graph shows a rotation of rectangle PQRS 90° counterclockwise?

18. Find the scale factor to dilate △ABC to △A'B'C'.

    A. scale factor: ½   B. scale factor: 2

    C. scale factor: ⅓   D. scale factor: 3