

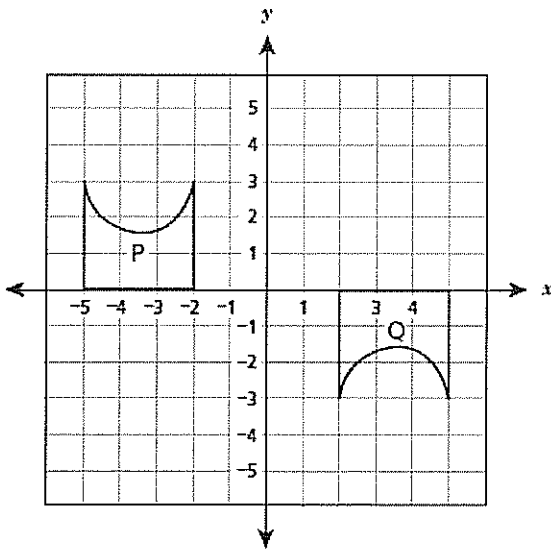
## Review for Transformation Assessment

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_

1. A sequence of transformations was applied to an equilateral triangle in a coordinate plane. The transformations used were rotations, reflections, and translations. Which statement about the resulting figure is true?
- A It must be an equilateral triangle with the same side lengths as the original triangle.
  - B It must be an equilateral triangle, but the side lengths may differ from the original triangle.
  - C It may be a scalene triangle, and all the side lengths may differ from the original triangle.
  - D It may be an obtuse triangle with at least one side the same length as the original triangle.
2. Figure Q was the result of a sequence of transformations on figure P, both shown below.



Which sequence of transformations could take figure P to figure Q?

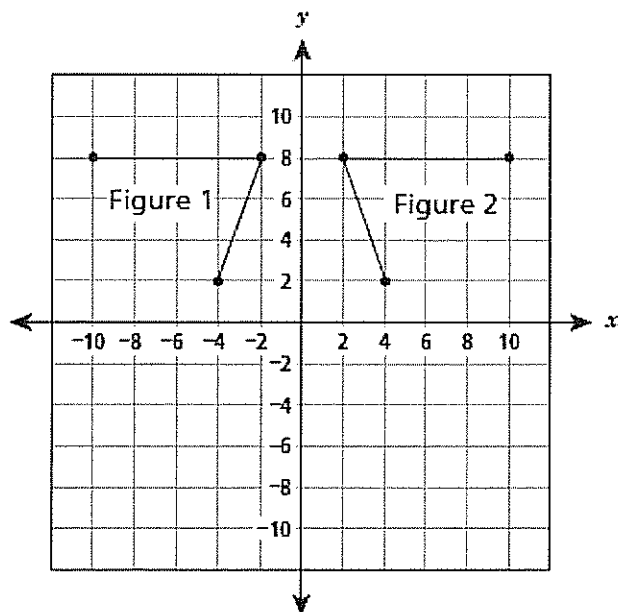
- A reflection over the  $x$ -axis and translation 7 units right
  - B reflection over the  $y$ -axis and translation 3 units down
  - C translation 1 unit right and  $180^\circ$  rotation about the origin
  - D translation 4 units right and  $180^\circ$  rotation about the origin
- 2A. Is there another possible sequence of transformations that could take figure P to figure Q? Explain your answer.

3. Rectangle  $R$  undergoes a dilation with scale factor 0.5 and then a reflection over the  $y$ -axis. The resulting image is Rectangle  $S$ . Which statement about Rectangles  $R$  and  $S$  is true?

- A They are congruent and similar.
- B They are similar but not congruent.
- C They are congruent but not similar.
- D They are neither congruent nor similar.

3A. Now explain in detail why you chose the answer you did in the question above. Use evidence!

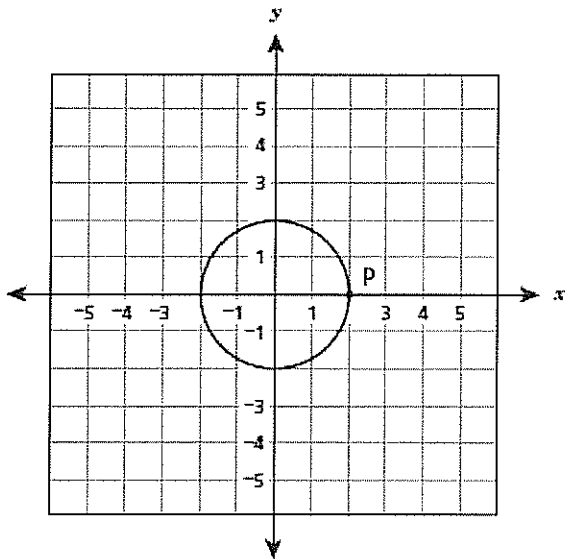
4. Figure 1 can be transformed to create Figure 2 using a single transformation.



Which transformation can be used to accomplish this?

- A dilation
- B rotation
- C reflection
- D translation

5. The circle shown below is centered at  $(0, 0)$  and passes through point P located at  $(2, 0)$ .



The circle is dilated with the center of dilation at the origin and a scale factor of 0.5 and then translated up 3 units. What are the coordinates of the image of point P after this transformation?

- A  $(4, 3)$
- B  $(1, 3)$
- C  $(1, 1.5)$
- D  $(0.5, 3)$