8.G.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

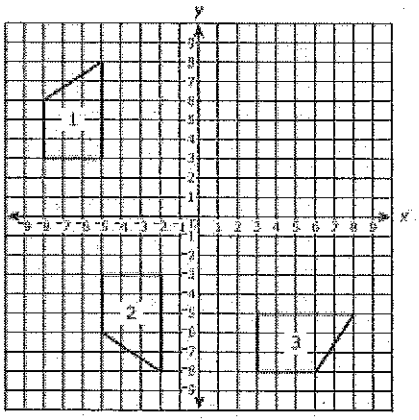
Which of the following is not a congruence transformation?

A. A reflection over the x-axis
B. A dilation with a scale factor of 0.5
C. A translation 1 unit left
D. A dilation with a scale factor 1

Triangle ABC undergoes a series of some of the following transformations to become triangle DEF:
dilation, reflection, rotation, translation

Which statement is true?
A) Triangle DEF is always congruent to triangle ABC.
B) Triangle DEF is sometimes congruent to triangle ABC.
C) Triangle DEF is never congruent to triangle ABC.
D) There is not information to answer the question.

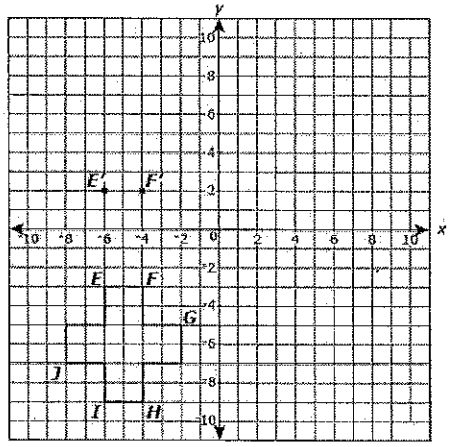
Which statement describes a possible sequence of transformations that take figure 1 to figure 2?



A) a reflection across the x-axis, followed by a translation 2 units to the left
B) a reflection across the x-axis followed by a translation 3 units to the right
C) a rotation 180 degrees clockwise about the origin followed by a translation 2 units to the left
D) a rotation 180 degrees clockwise about the origin followed by a translation 3 units to the right

(USE IMAGE TO THE LEFT)
Figure 3 can also be created by transforming figure 1 with a sequence of transformations. Which statement describes a possible sequence of transformations that take figure 1 to figure 3?

A) a rotation 180 degrees clockwise about the origin followed by a translation 2 units to the left
B) a rotation 90 degrees clockwise about the origin followed by a reflection across the x-axis
C) a rotation 180 degrees clockwise about the origin followed by a reflection across the y-axis
D) a rotation 90 degrees clockwise about the origin followed by a translation 3 units to the right



Mr. Novak draws a figure on a coordinate grid. He begins to construct a new figure congruent to the figure shown by points E' and F' as shown on the coordinate grid.

Part A: Mr. Novak used two different transformations to create the new figure. Based on the location of points E' and F', what would be the coordinates of G', H', I' and J'?

G'(-2, 4) I'(-6, 8)
H'(-4, 8) J'(-8, 6)

Part B: Describe a sequence of transformations which would result in the new figure being congruent to the original figure based on point E' and F'.

A reflection over the x axis & a translation 1 unit down.

8.G.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

Which transformation can result in a new figure that is not congruent to the original figure?

(A.) Dilation B. Reflection

C. Rotation D. Translation

Fill in the blank.
All _____ are either similar or congruent to each other.

(A.) Circles B. Triangles

C. Rectangles D. Parallelograms

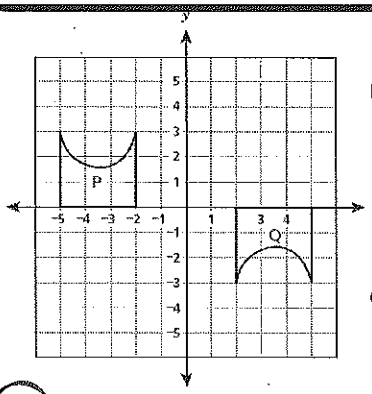


Figure Q was the result of a sequence of transformations on Figure P, both shown to the left. Which sequence could take Figure P?

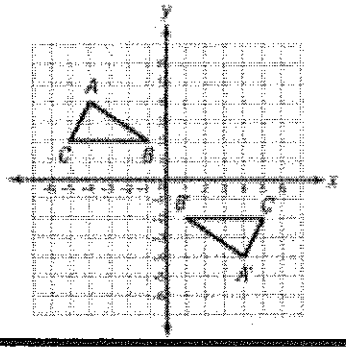
A) reflection over the x-axis and translation 7 units ~~down~~ to the right
B) reflection over the y-axis and translation 3 units down
C) translation 1 unit right and 180° rotation about the origin
D) translation 4 units right and 180° rotation about the origin

Triangle ABC is reflected over a line forming triangle A'B'C'.

Suppose triangle A'B'C' is scalene. Which line segment in triangle A'B'C' is the same length as line segment BC?

A. $\overline{A'B'}$
B. $\overline{A'C'}$
C. $\overline{B'C'}$
D. $\overline{C'A'}$

Triangle ABC and triangle A'B'C' are shown on the coordinate plane below.
Which sequence of rigid motions shows that triangle ABC is congruent to triangle A'B'C'?

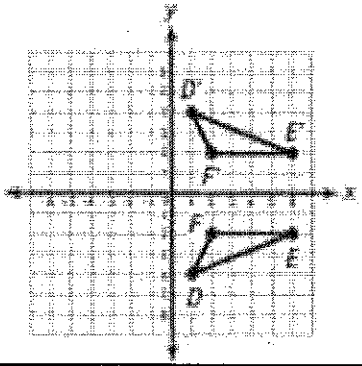


A. reflection over the y-axis, then 180° rotation about the origin

B. reflection over the y-axis, then reflection over the x-axis

C. reflection over the y-axis, then translation of 8 units down

Which rule describes how ΔDEF could be transformed to ΔD'E'F'?



A. $(x, y) \rightarrow (x, -y)$
B. $(x, y) \rightarrow (-x, y)$
C. $(x, y) \rightarrow (-x, -y)$
D. $(x, y) \rightarrow (x, y + 4)$