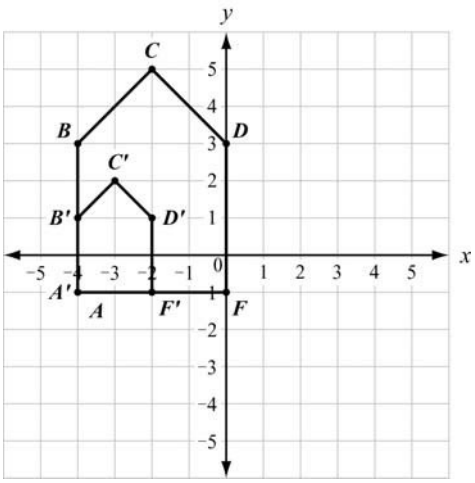
SAMPLE ITEMS

1. Figure $A'B'C'D'F'$ is a dilation of figure $ABCDF$ by a scale factor of $\frac{1}{2}$. The dilation is centered at (–4, –1).



Which statement is true?

A. $\frac{AB}{A'B'} = \frac{B'C'}{BC}$

B. $\frac{AB}{A'B'} = \frac{BC}{B'C'}$

C. $\frac{AB}{A'B'} = \frac{BC}{D'F'}$

D. $\frac{AB}{A'B'} = \frac{D'F'}{BC}$

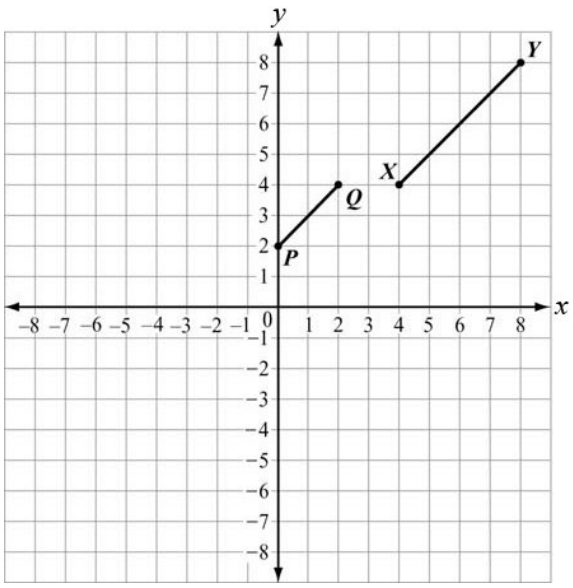
Correct Answer: B

2. Which transformation results in a figure that is similar to the original figure but has a greater area?

A. a dilation of $\triangle QRS$ by a scale factor of 0.25
B. a dilation of $\triangle QRS$ by a scale factor of 0.5
C. a dilation of $\triangle QRS$ by a scale factor of 1
D. a dilation of $\triangle QRS$ by a scale factor of 2

Correct Answer: D

3. In the coordinate plane, segment $\overline{PQ}$ is the result of a dilation of segment $\overline{XY}$ by a scale factor of $\frac{1}{2}$.



Which point is the center of dilation?

A. (–4, 0)
B. (0, –4)
C. (0, 4)
D. (4, 0)

Correct Answer: A

Note: Draw lines connecting corresponding points to determine the point of intersection (center of dilation).