

CHECK YOUR UNDERSTANDING

Directions: Work with your partner and complete all problems.

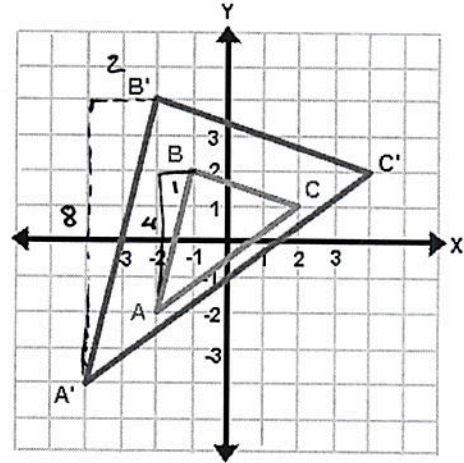
Target 6A: Understand similarity in terms of transformations in the coordinate plane.

- Determine if the graph illustrates an enlargement or reduction and find the scale factor from $\triangle ABC$ to $\triangle A'B'C'$.

Enlargement or Reduction? Enlargement

Scale Factor: 2

$$\frac{4 \uparrow}{1 \rightarrow} \xrightarrow{\times 2} \frac{8 \uparrow}{2 \rightarrow}$$



Use the following information to answer questions 2 and 3. In the coordinate plane shown, $\triangle ABC$ has vertices $A(-4, 6)$, $B(2, 6)$, and $C(2, 2)$. The figure transforms (dilates) from $\triangle DEF$ to $\triangle ABC$.

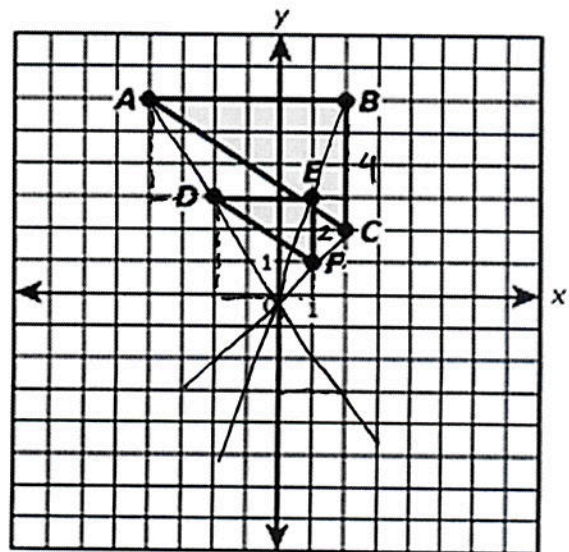
- Determine the center of dilation:

(0, 0)

- Determine the scale factor:

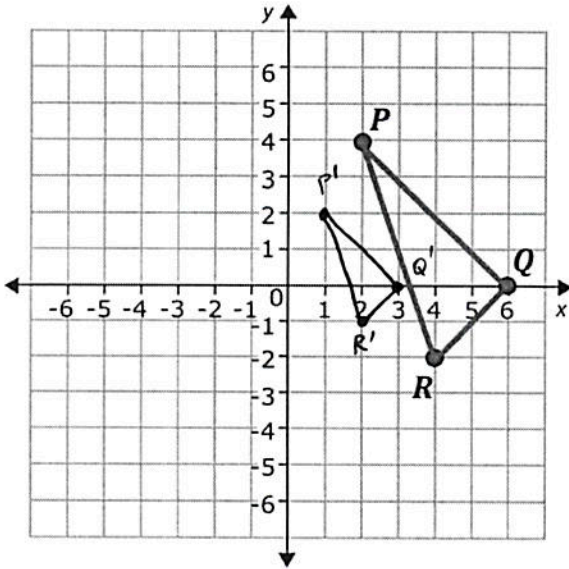
2

From $\triangle DEF$ to $\triangle ABC$!
 Notice $EF = 2$
 $BC = 4$ $\rightarrow \times 2$



So multiply each # below by $\frac{1}{2}$
 → or (in other words) divide each # by 2

4. Graph the image of $\Delta P'Q'R'$ after dilation with scale factor of $\frac{1}{2}$, centered at $(0,0)$. Write the coordinates of pre-image and the image in the space provided. Label your points.



P	(<u>2</u> , <u>4</u>)
Q	(<u>6</u> , <u>0</u>)
R	(<u>4</u> , <u>-2</u>)

P'	(<u>1</u> , <u>2</u>)
Q'	(<u>3</u> , <u>0</u>)
R'	(<u>2</u> , <u>-1</u>)

5. Complete a), b), and c) using the coordinate plane below:

- a) Graph ΔABC with vertices at: $A(-8, -8)$, $B(4, 4)$, and $C(8, 0)$. Label your points.

- b) Dilate ΔABC by a scale factor of $\frac{1}{4}$, centered at $(0,0)$.

A'	(<u>-2</u> , <u>-2</u>)
B'	(<u>1</u> , <u>1</u>)
C'	(<u>2</u> , <u>0</u>)

Same as #4

- c) Graph $\Delta A'B'C'$. Label your points.

