

## Geometry – Standard G.SRT.1 - Take-Home Practice

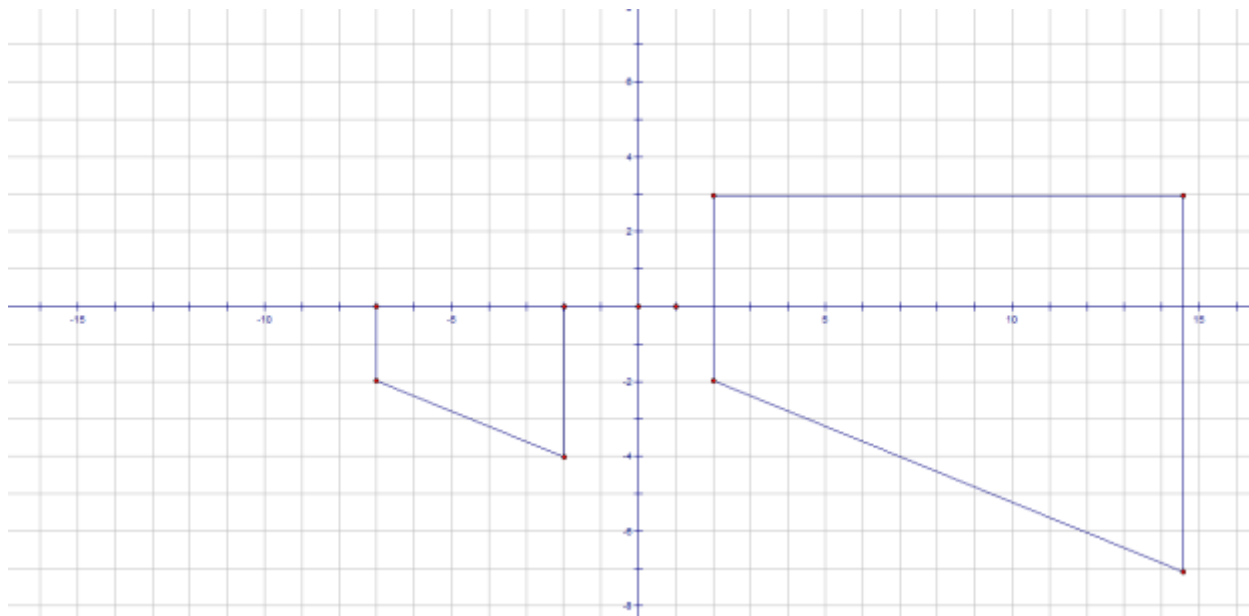
- Each of the following images gives a pre-image and a center of dilation. Using a ruler, dilate each image with a scale factor of  $\frac{1}{2}$  and put in the image in blue. Then dilate each one a second time by using a scale factor of  $\frac{3}{2}$  and put it in red.

a.

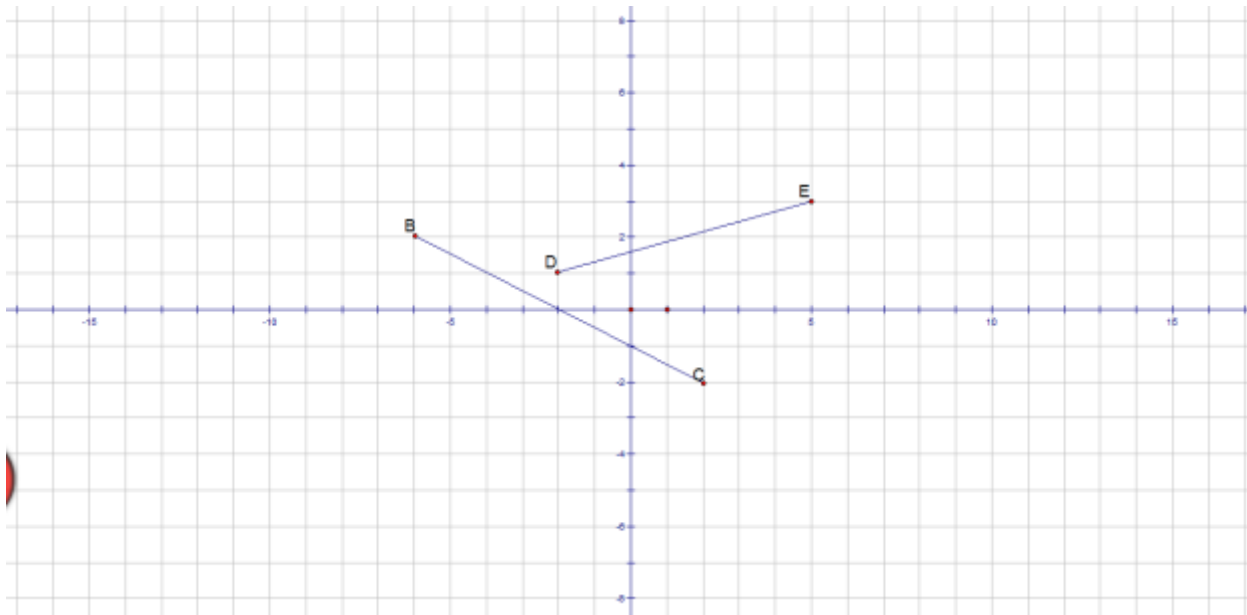


- The following picture shows a image and pre-image after a dilation.

- Find the center of dilation.
- What would the scale factor be if the smaller image was the pre-image?
- What would the scale factor be if the larger image was the pre-image?



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3. Above are two segments BC and DE.
  - a. Fill in the coordinates B(    ,    ), C(    ,    ), D(    ,    ), E(    ,    ).
  - b. How long are BC and DE (using grid units)?
  
  - c. Now, dilate BC and DE about the origin using a scale factor of 2. Name the segments  $B'C'$  and  $D'E'$ . Draw the images on the grid above.
  - d. Fill in the coordinates  $B'$ (    ,    ),  $C'$ (    ,    ),  $D'$ (    ,    ),  $E'$ (    ,    ).
  - e. How long are  $B'C'$  and  $D'E'$ ?
  - f. Decide if you think that  $BC \parallel B'C'$  and  $DE \parallel D'E'$ . PROVE your answer.
  
  - g. Now, dilate BC and DE about the origin using a scale factor of 3. Name the segments  $B''C''$  and  $D''E''$ . Draw the images on the grid above (if there's room).
  - h. Fill in the coordinates  $B''$ (    ,    ),  $C''$ (    ,    ),  $D''$ (    ,    ),  $E''$ (    ,    ).
  - i. How long are  $B''C''$  and  $D''E''$ ?
  - j. Decide if you think that  $BC \parallel B''C''$  and  $DE \parallel D''E''$ . PROVE your answer.