

Notes - Dilations.notebook

Dilations

Name: _____

Dilate:

Scale Factor:

Example:

Dilate $\triangle RST$ with vertices $R(-1, 2)$, $S(-1, -1)$ and $T(2, -1)$ by a scale factor of 3 with the origin as the center of dilation.

Steps:

1. Plot original triangle.
2. Multiply the pre-image points by the scale factor. What are the points of the image?

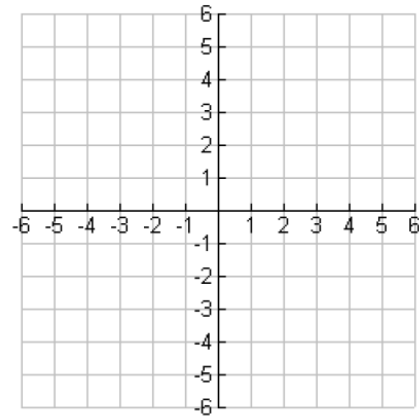
R' _____

S' _____

T' _____

3. Plot the image

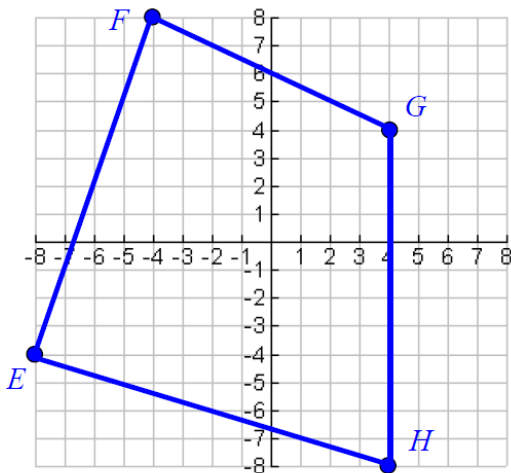
4. Find the area of the pre-image and the area of the image. How does the ratio of the image to the pre-image compare to the scale factor?



You Try!

Dilate each of the following by the given scale factor.

1. Dilate Quadrilateral EFGH by a scale factor of $\frac{1}{4}$.



E _____

E' _____

F _____

F' _____

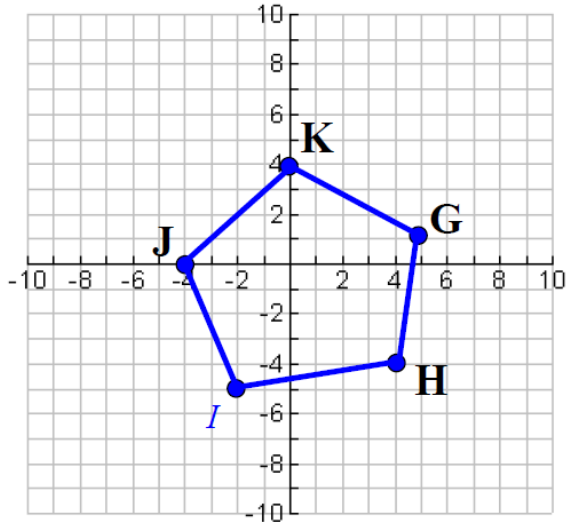
G _____

G' _____

H _____

H' _____

2. Dilate Pentagon GHIJK by a scale factor of 1.5



G _____ G' _____

H _____ H' _____

I _____ I' _____

J _____ J' _____

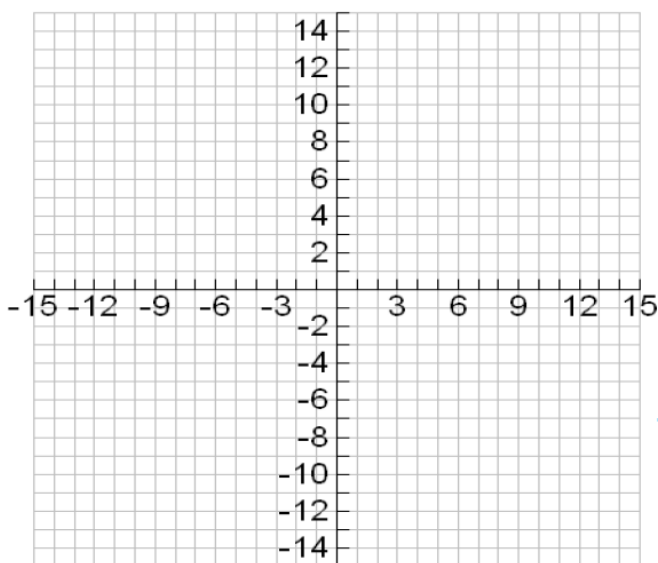
K _____ K' _____

3. Given $\triangle ABC$ with $A(-4, 5)$, $B(3, 2)$, and $C(-2, -3)$, dilate the triangle such that $(x', y') = (3x, 3y)$.

What does this notation mean?

What is the scale factor to make $\triangle ABC \sim \triangle A'B'C'$? \longrightarrow

Draw the dilation below and give the coordinates of its vertices.

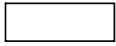


A' _____

B' _____

C' _____

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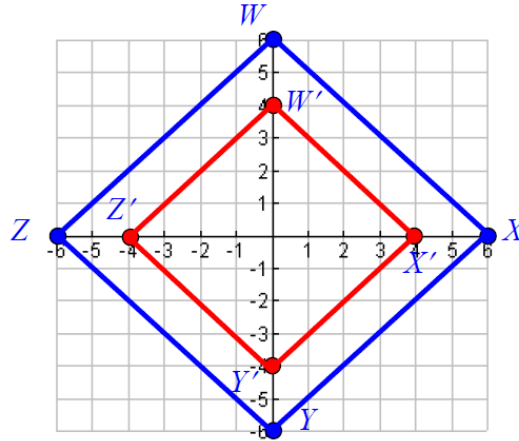
CCM8

Dilations

Name:

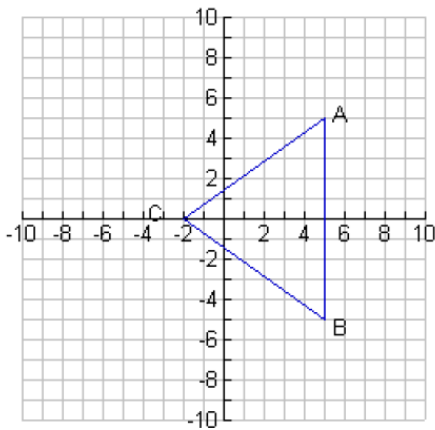
4. The image of WXYZ is figure W'X'Y'Z'.

Determine the scale factor for this dilation and give the rule that could be used to create the dilation.

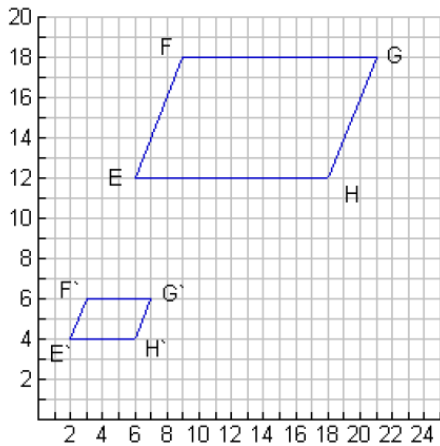
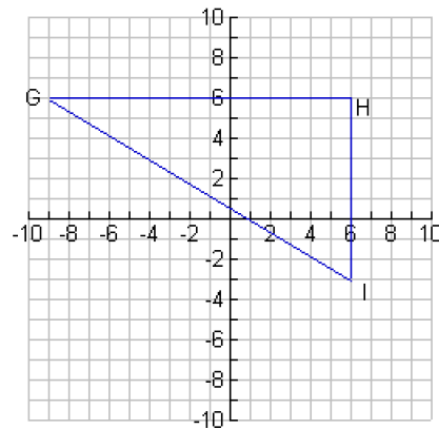


Dilate each figure by the given scale factor.

6. Scale factor of $1/2$



7. Scale factor of $1/3$



8. Determine the scale factor of the dilation to the left and give the rule that could be used to create the dilation.