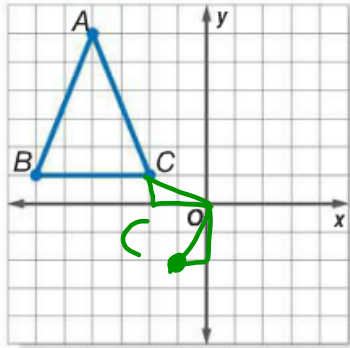


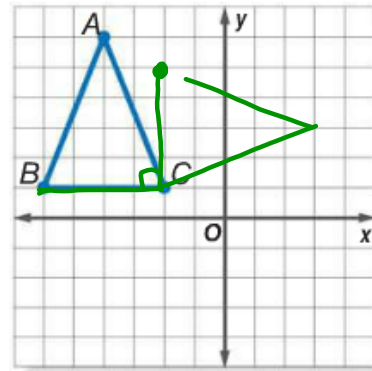
Starter

If $\triangle ABC$ is rotated 90° counterclockwise about the origin, which is the resulting image of point C ?



- (A) $(2, -1)$
- (B) $(1, -2)$
- (C) $(-2, -1)$
- (D) $(-1, -2)$

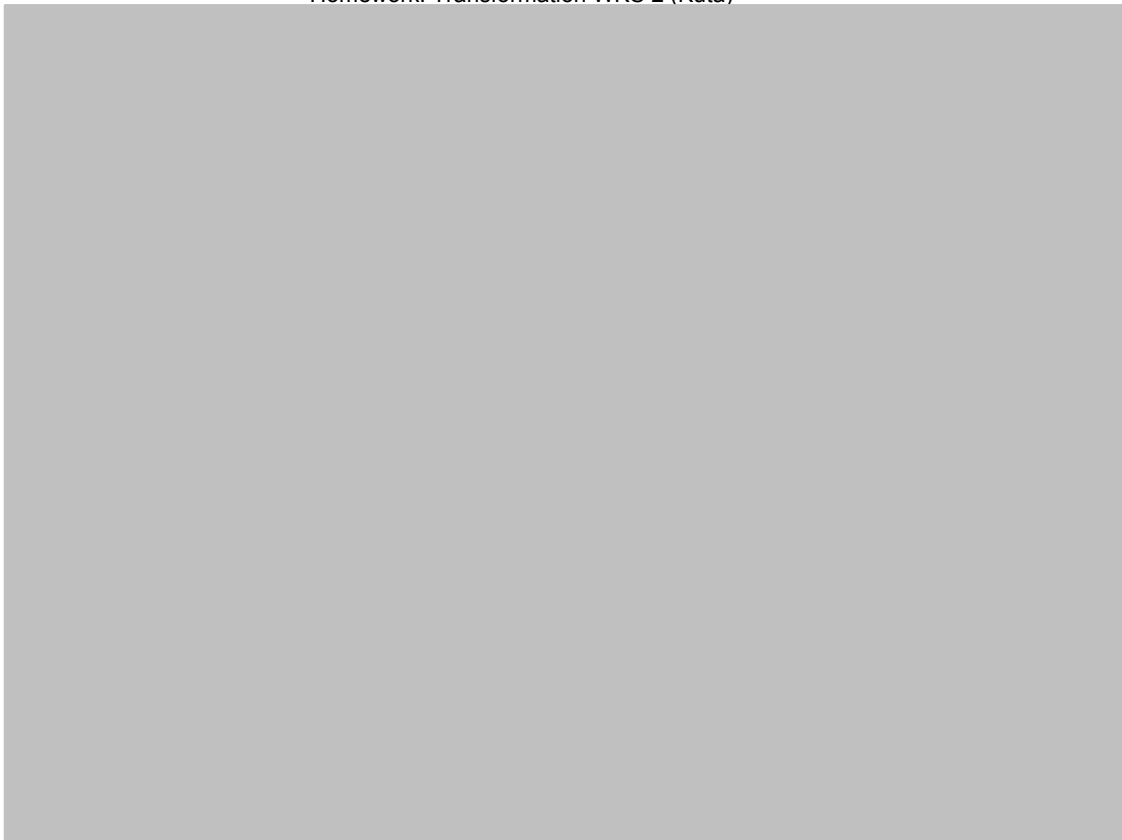
If $\triangle ABC$ is rotated 90° clockwise about point C , which is the resulting image of point B ?



- (F) $(6, 1)$
- (G) $(6, -1)$
- (H) $(-2, 5)$
- (I) $(-2, -3)$

Feb 17-7:22 AM

Homework: Transformation WKS 2 (Kuta)



Dec 4-8:01 AM

Unit 4 Day 5 - Dilations

I can dilate a figure.

Dec 4-8:08 AM

Dilations

A **dilation** is a transformation that enlarges or reduces a figure by a scale factor relative to a center point. That point is called the **center of dilation**.

Dilations in the Coordinate Plane

A dilation with a scale factor of k will be:

- an enlargement, or an image larger than the original, if $k > 1$.
- a reduction, or an image smaller than the original, if $0 < k < 1$.
- the same as the original figure if $k=1$.

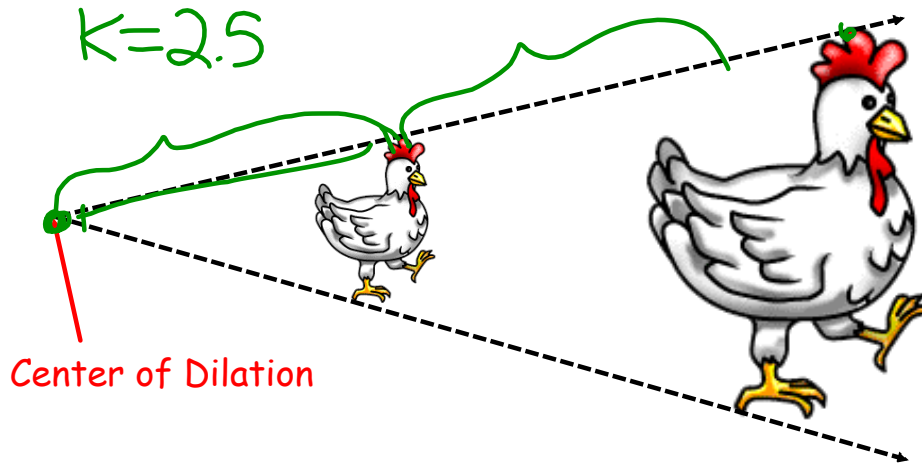
When the center of dilation in the coordinate plane is the origin, each coordinate of the pre image is multiplied by the scale factor k to find the coordinates of the image.

$$(x,y) \rightarrow (kx, ky)$$

Feb 6-2:20 PM

Dilation

A dilation uses a scale factor to enlarge or reduce a figure.

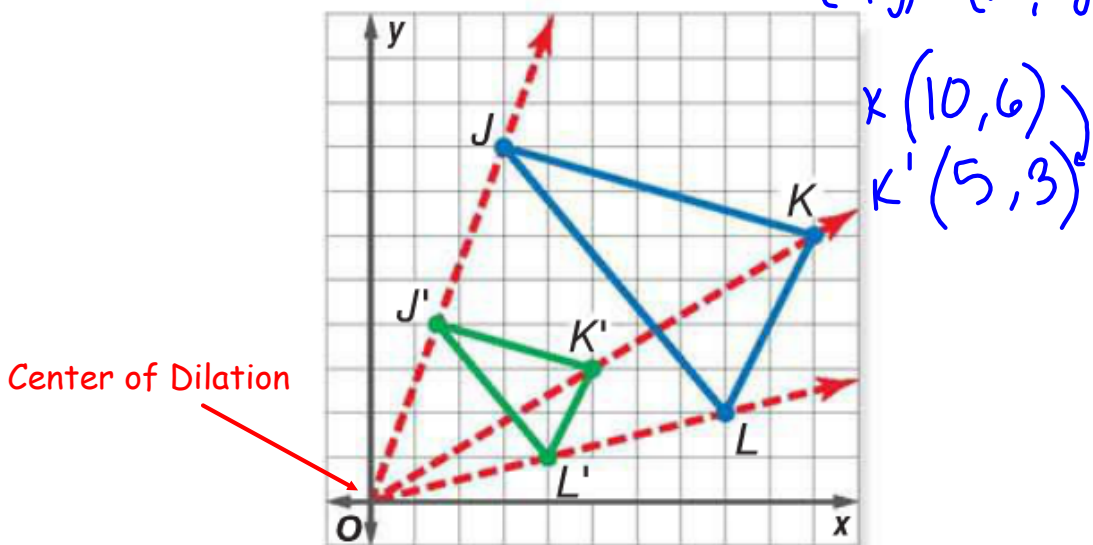


Feb 17-7:09 AM

When the center of dilation in the coordinate plane is the origin, each coordinate of the preimage is multiplied by the scale factor k to find the coordinates of the image.

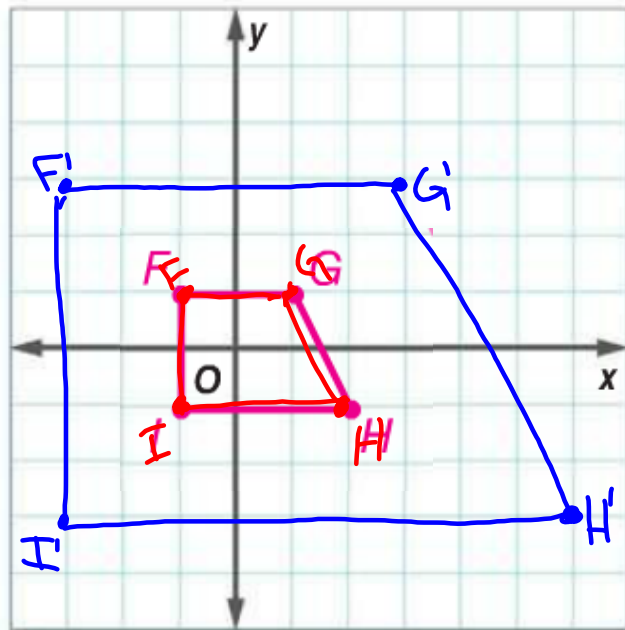
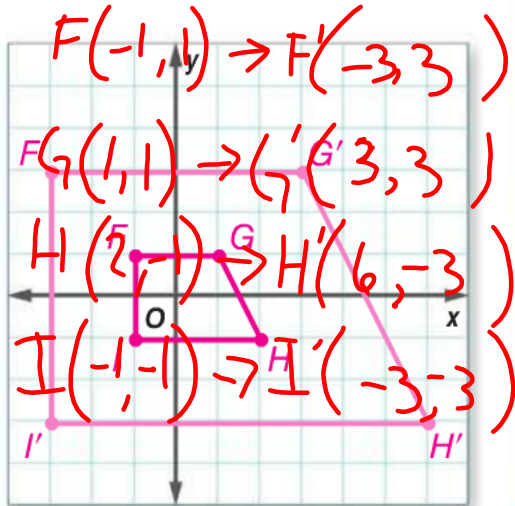
Symbols $(x, y) \rightarrow (kx, ky)$

$(\frac{1}{2}x, \frac{1}{2}y)$
 $(x, y) \rightarrow (5x, 5y)$



Feb 17-7:14 AM

A figure has vertices $F(-1, 1)$, $G(1, 1)$, $H(2, -1)$, and $I(-1, -1)$. Graph the figure and the image of the figure after a dilation with a scale factor of 3.

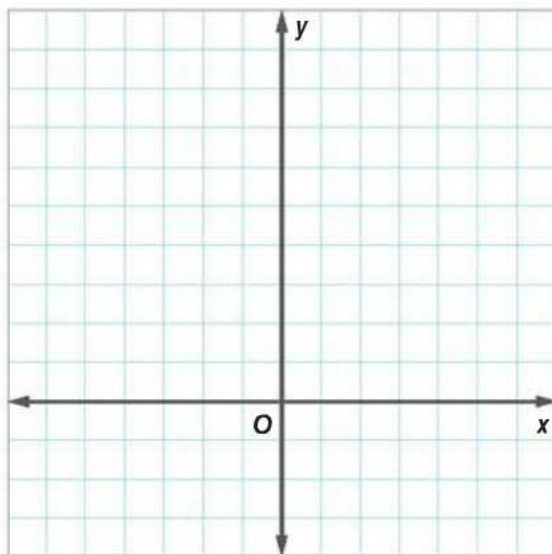


Feb 17-7:18 AM

Find the coordinates of the vertices of each figure after a dilation with the given scale factor k . Then graph the original image and the dilation.

1. $A(3, 5)$, $B(0, 4)$, $C(-2, -2)$; $k = 2$

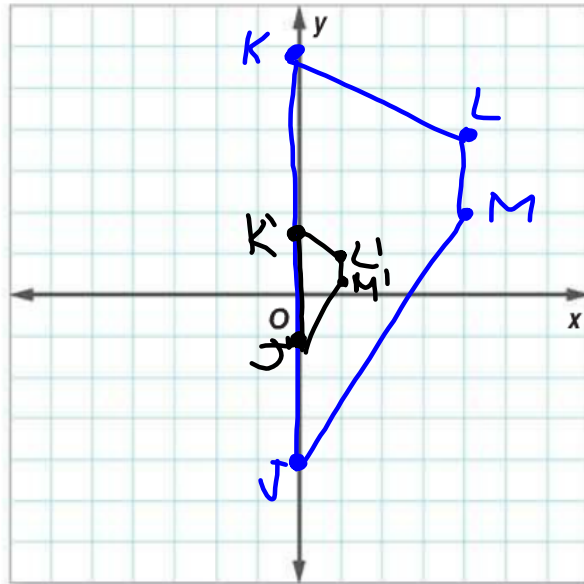
Show your work.



Feb 17-7:14 AM

Find the coordinates of the vertices of each figure after a dilation with the given scale factor k . Then graph the original image and the dilation.

2. $J(0, -4), K(0, 6), L(4, 4), M(4, 2); k = \frac{1}{4}$



$$\begin{aligned} J(0, -4) &\rightarrow J'(0, -1) \\ K(0, 6) &\rightarrow K'(0, 1.5) \\ L(4, 4) &\rightarrow L'(1, 1) \\ M(4, 2) &\rightarrow M'(1, 0.5) \end{aligned}$$

Feb 17-7:24 AM

The pre image and the image are the same shape but not necessarily the same size since the figure is enlarged or reduced by a scale factor.

A triangle has vertices $A(0,0)$, $B(8,0)$ and $C(3,-2)$. Find the coordinates of the triangle after a dilation with a scale factor of 4.

A figure has vertices $W(-2, 4)$, $X(1,4)$, $Y(-3,-1)$, and $Z(3,-1)$. Find the coordinates of the triangle after a dilation with a scale factor of 2.

Feb 6-2:29 PM

Lucas wants to enlarge a 3- by 5-inch photo to a 7.5- by 12.5-inch photo. What is the scale factor of the dilation?

A graphic designer created a logo on 8.5- by 11-inch paper. In order to be placed on a business card, the logo needs to be 1.7 inches by 2.2 inches. What is the scale factor of the dilation?

Feb 6-2:42 PM

A triangle has vertices $A(-2,3)$, $B(0,0)$, and $C(1,1)$.

a- Find the coordinates of the triangle if it is reflected over the x-axis, then dilated by a scale factor of 3.

b- Find the coordinates if the original triangle is dilated by a scale factor of 3, then reflected over the x-axis.

c- Are the two transformations commutative?

Feb 6-2:47 PM

Assignment

Homework Practice Dilations
Skills Practice Dilations

Feb 17-7:26 AM

Nov 30-6:28 PM