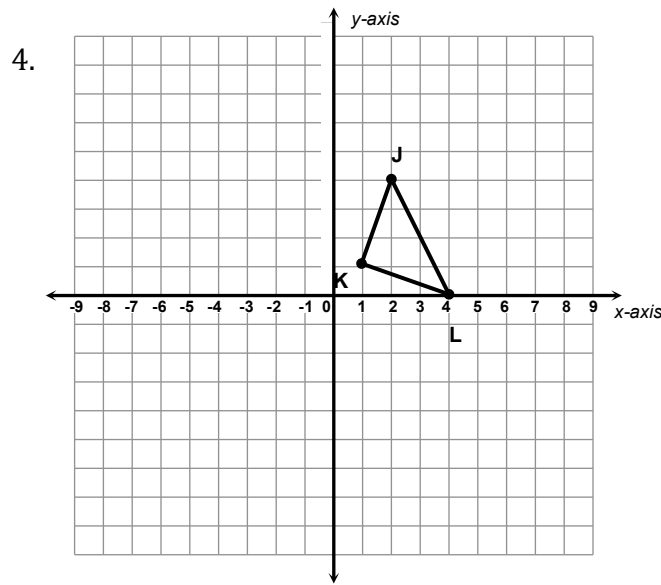


## Dilations/Translations Worksheet

**Directions:** Answer the following questions to the best of your ability. For the y-axis, use the same scaling as the x-axis

1. In Math, the word dilate means to \_\_\_\_\_ or \_\_\_\_\_ a figure.
2. If a scale factor is less than 1, then your figure gets \_\_\_\_\_.
3. If a scale factor is greater than 1, then your figure gets \_\_\_\_\_.

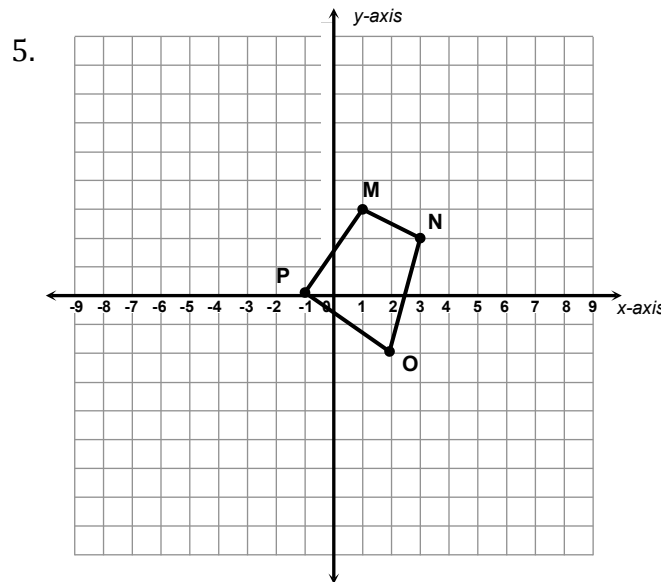


Graph the dilated image of triangle JKL using a scale factor of 2 and (0,0) as the center of dilation.

J: \_\_\_\_\_ J': \_\_\_\_\_

K: \_\_\_\_\_ K': \_\_\_\_\_

L: \_\_\_\_\_ L': \_\_\_\_\_



Graph the dilated image of quadrilateral MNOP using a scale factor of 3 and the origin as the center of dilation.

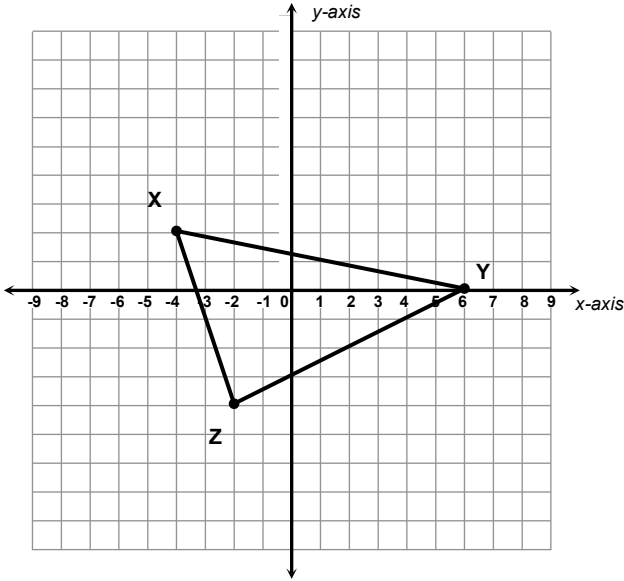
M: \_\_\_\_\_ M': \_\_\_\_\_

N: \_\_\_\_\_ N': \_\_\_\_\_

O: \_\_\_\_\_ O': \_\_\_\_\_

P: \_\_\_\_\_ P': \_\_\_\_\_

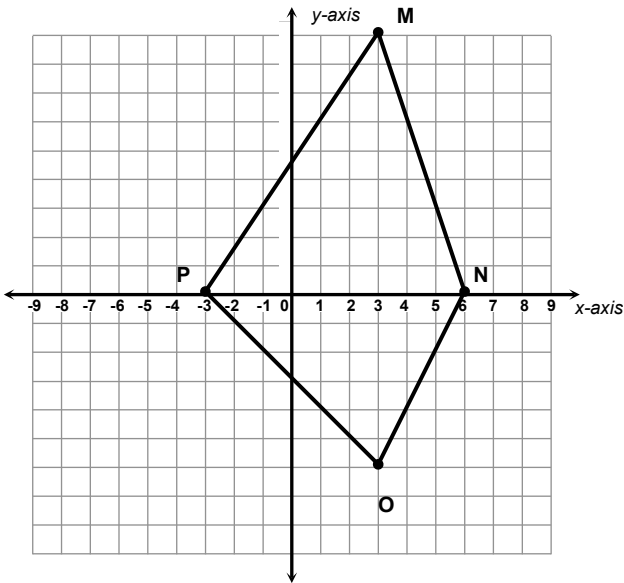
6.



Graph the dilated image of triangle XYZ using a scale factor of 1.5 and (0,0) as the center of dilation.

X: \_\_\_\_\_ X': \_\_\_\_\_  
 Y: \_\_\_\_\_ Y': \_\_\_\_\_  
 Z: \_\_\_\_\_ Z': \_\_\_\_\_

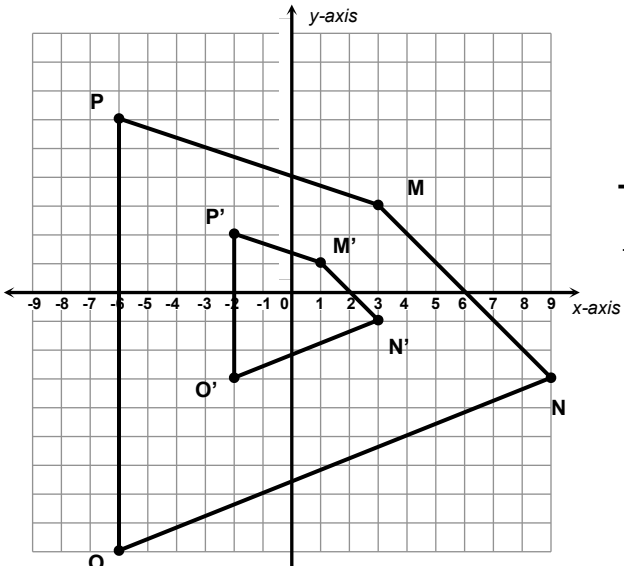
7.



Graph the dilated image of quadrilateral MNOP using a scale factor of  $\frac{1}{3}$  and the origin as the center of dilation.

M: \_\_\_\_\_ M': \_\_\_\_\_  
 N: \_\_\_\_\_ N': \_\_\_\_\_  
 O: \_\_\_\_\_ O': \_\_\_\_\_  
 P: \_\_\_\_\_ P': \_\_\_\_\_

8.



Describe the dilation of quadrilateral MNOP, using the origin as the center.

\_\_\_\_\_  
 \_\_\_\_\_

9. The table below shows the coordinates of triangle RST and the coordinates of R' in triangle R'S'T'. Triangle R'S'T' is a dilation of triangle RST.

Triangle RST		Triangle R'S'T'	
R	(-2, -3)	R'	(-6, -9)
S	(0, 2)	S'	
T	(2, -3)	T'	

**Part A**

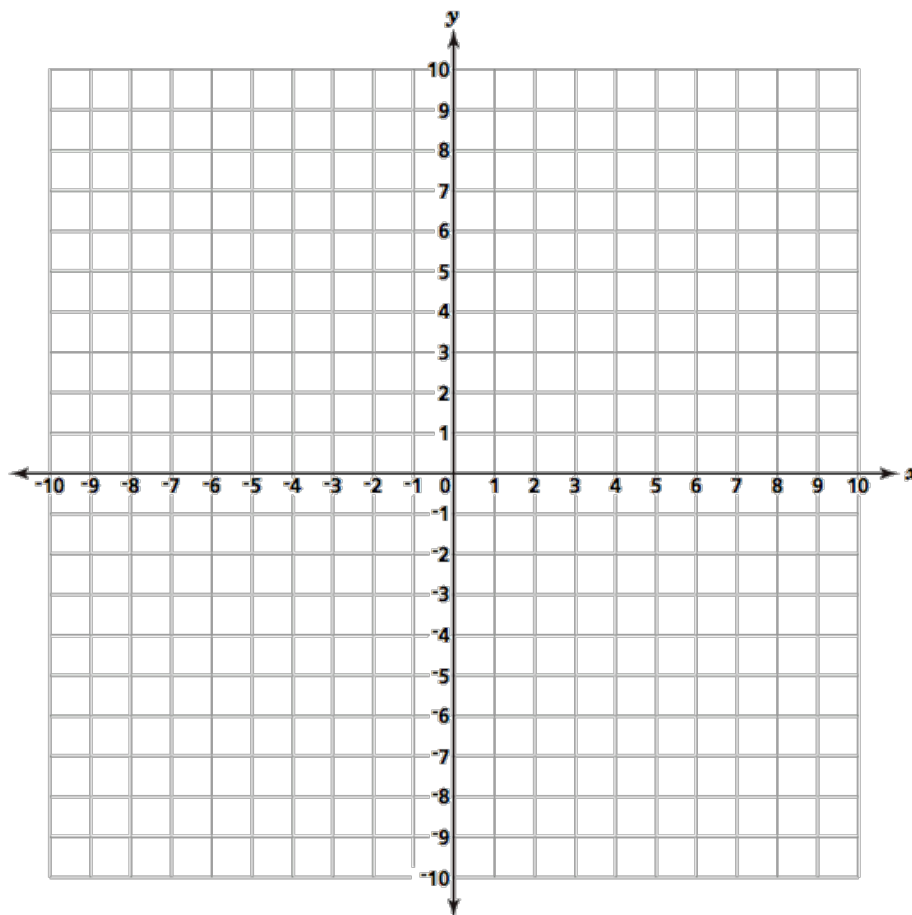
What are the coordinates of point S' and point T'?

**Answer** S' = (\_\_\_\_, \_\_\_\_)

T' = (\_\_\_\_, \_\_\_\_)

**Part B**

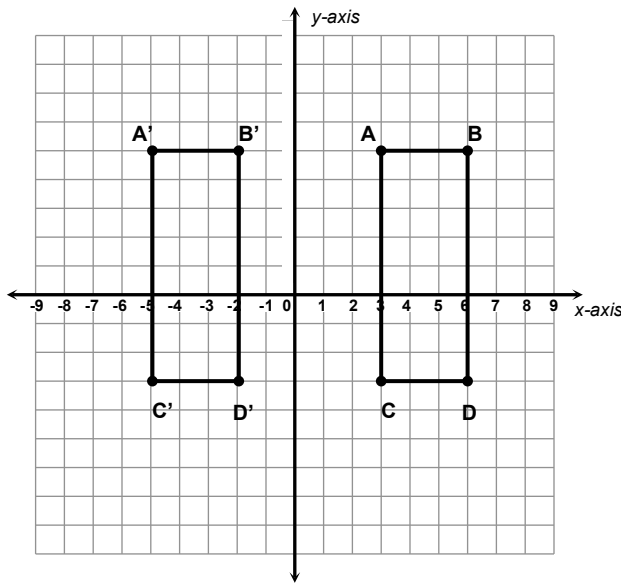
On the grid below, draw triangle RST and triangle R'S'T'.



10. In Math the word translate means to \_\_\_\_\_ a figure.

**Describe the translation.**

11.



Description:

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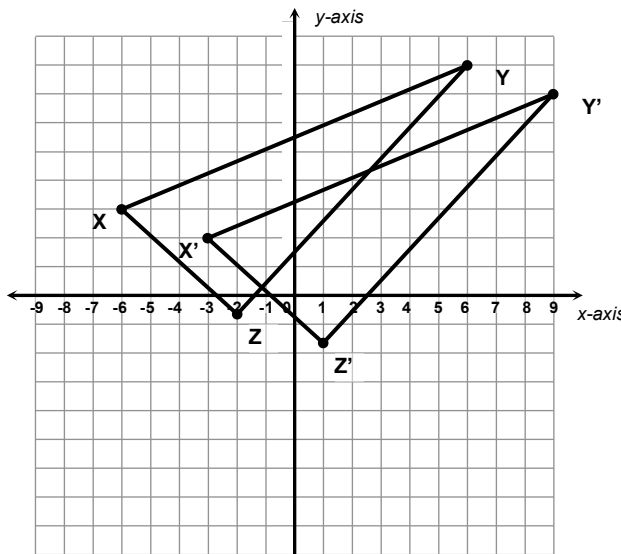


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12.



Description:

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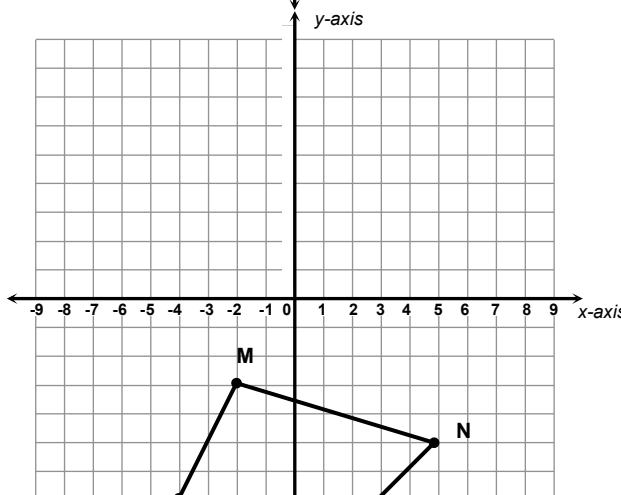


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13.



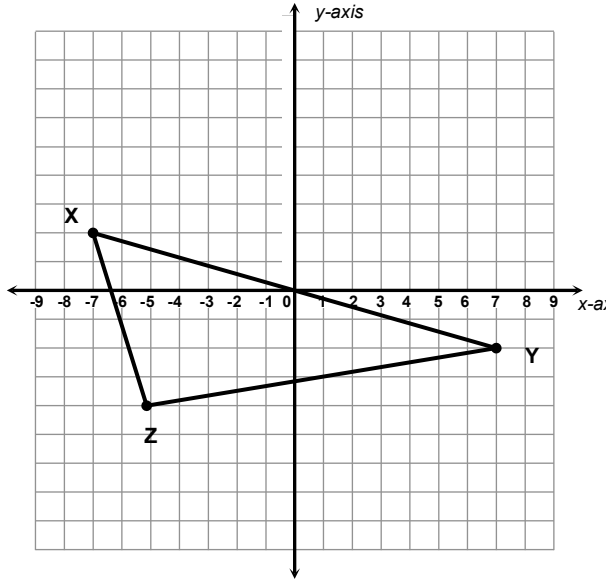
Draw the translation of Quadrilateral MNOP four units to the left and two units up. Label your new figure M'N'O'P'.

What are the coordinates of M', N', O', and P'?

M': \_\_\_\_\_ N': \_\_\_\_\_

O': \_\_\_\_\_ P': \_\_\_\_\_

14.



Draw the translation of Triangle XYZ two units to the right and three units up. Label your new triangle X'Y'Z'.

What are the coordinates of X'? \_\_\_\_\_

What quadrant is Y' in? \_\_\_\_\_