

Dilations Practice

Key

DATE: 2/14

Target 6A. Perform dilation with a given center and scale factor on a figure in the coordinate plane

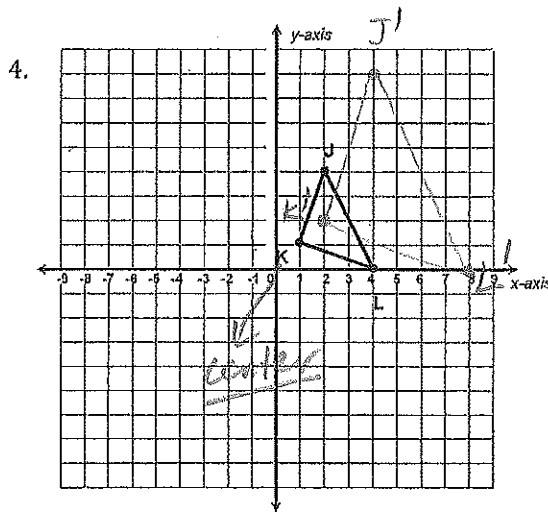
Target 6C. Define similarity using rigid motions and dilations

1. In Math, the word dilate means to enlarge or reduce a figure.

2. If a scale factor is less than 1, then your figure gets smaller.

3. If a scale factor is greater than 1, then your figure gets bigger.

{ in size only!
shape is not altered }

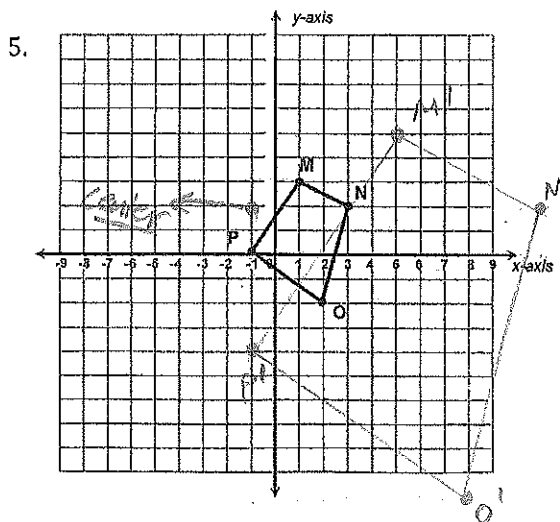


Graph the dilated image of triangle JKL using a scale factor of 2 and $(0,0)$ as the center of dilation.

J: (2,4) $\times 2$ J': (4,8)

K: (1,1) $\times 2$ K': (2,2)

L: (4,0) $\times 2$ L': (8,0)



Graph the dilated image of a quadrilateral MNOP using a scale factor of 3 and $(-1,2)$ as the center of dilation.

M: (1,3) M': (5,5)

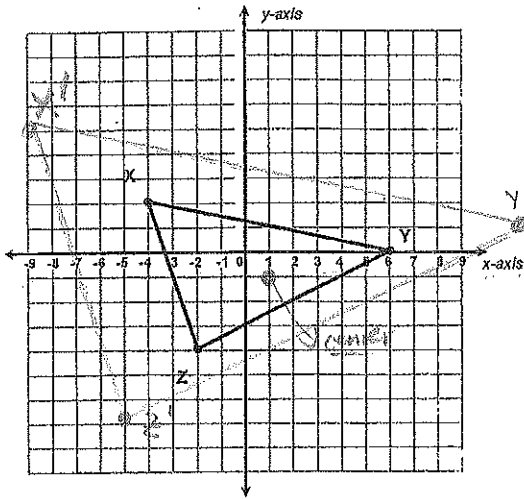
N: (3,2) N': (11,2)

O: (2,-2) O': (8,-10)

P: (-1,0) P': (-1,-4)

Always label the center! You must keep this in mind...

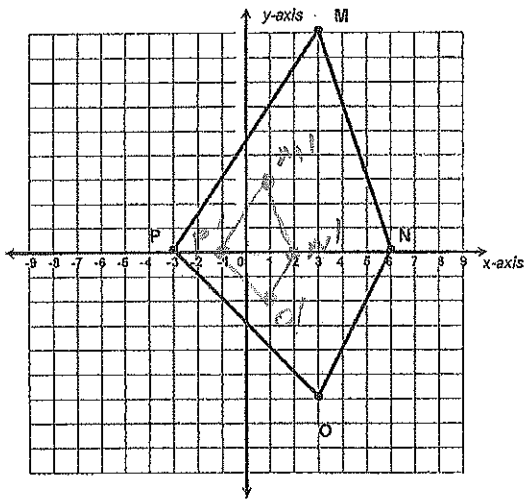
6.



Graph the dilated image of a triangle XYZ using a scale factor of 2 and $(1, -1)$ as the center of dilation.

X: $(-4, 2)$	X': $(-9, 5)$
Y: $(6, 0)$	Y': $(11, 1)$
Z: $(-2, -4)$	Z': $(-5, -7)$

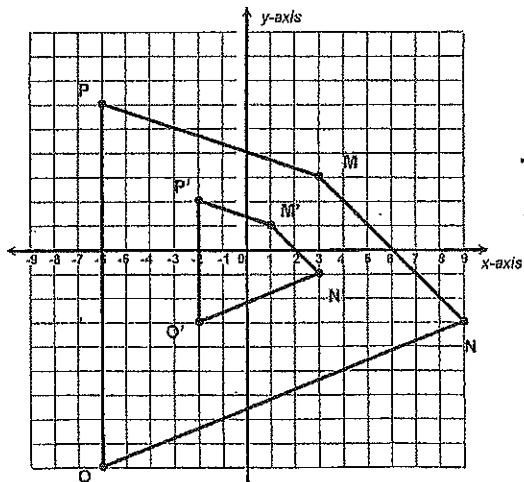
7.



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

M: $(3, 9) \div 3$	M': $(1, 3)$
N: $(6, 0)$	N': $(2, 0)$
O: $(3, -6)$	O': $(1, -2)$
P: $(-3, 0)$ ✓	P': $(-1, 0)$

8.



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

Reduction with a scale factor of

P(-6, 6) $\xrightarrow{\div 3}$	P'(-2, 2)
M(3, 3) \longrightarrow	M'(1, 1)
N(9, -3) \longrightarrow	N'(3, 1)
O(-6, -9) \longrightarrow	O'(-2, -3)

∴ Scale factor = $\frac{1}{3}$