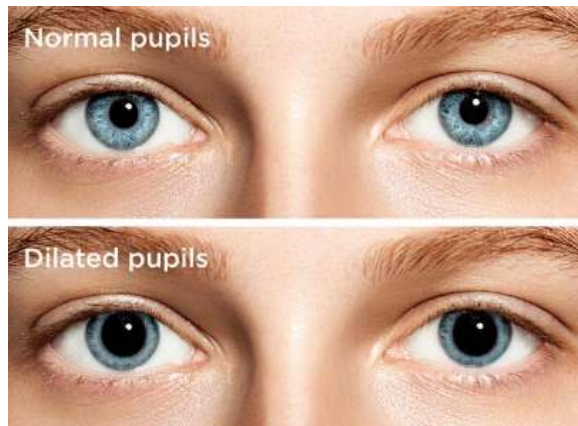
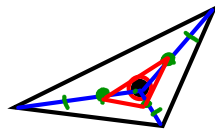


Dilations

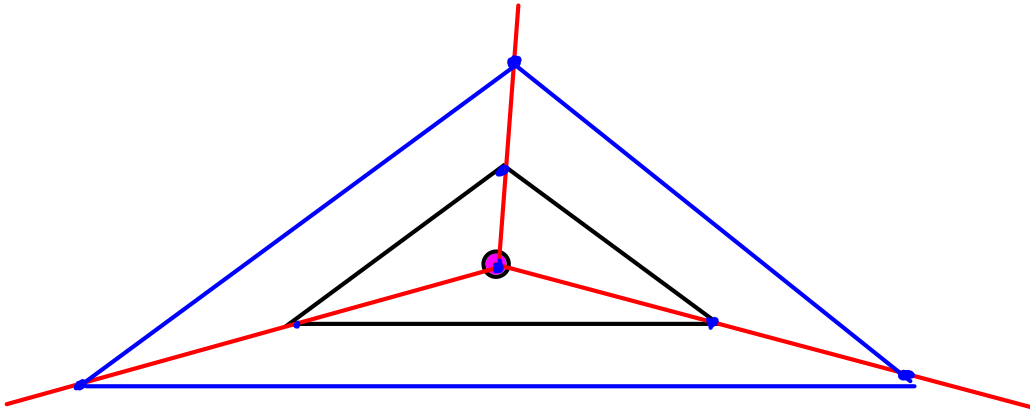


Dilate with a scale factor of $\frac{1}{3}$



Center of dilation

Dilate with a scale factor of 2



More Transformational Geometry - Dilation

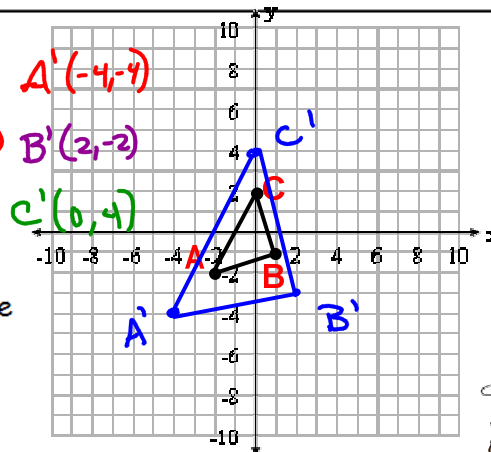
Definition: enlarge or shrink

Properties that are preserved: shape

To dilate with the origin as the center, multiply both the x and y-coordinate by the given scale factor.

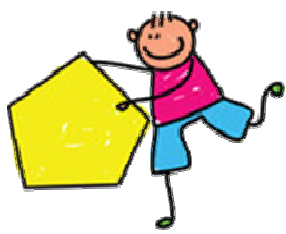
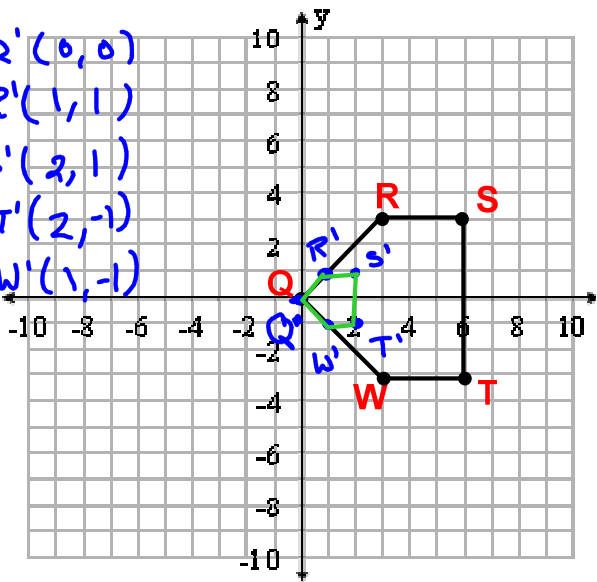
Examples:

1) Graph the following triangle and label the points. $A(-2, -2)$ $B(1, -1)$ $C(0, 2)$ Now dilate the triangle with the center of dilation at the origin and a scale factor of 2. Graph and label the new triangle.



2) Graph the pentagon
 $Q(0, 0)$ $R(3, 3)$ $S(6, 3)$
 $T(6, -3)$ $W(3, -3)$. Now dilate
the figure with the center of
dilation as the origin and a scale
factor of $\frac{1}{3}$. Graph and label
the new figure.

$Q'(0, 0)$
 $R'(1, 1)$
 $S'(2, 1)$
 $T'(2, -1)$
 $W'(1, -1)$



1.) Dilate the following triangle with a
scale factor of 3.

$$A(0, 2) \rightarrow A'(0, 6)$$

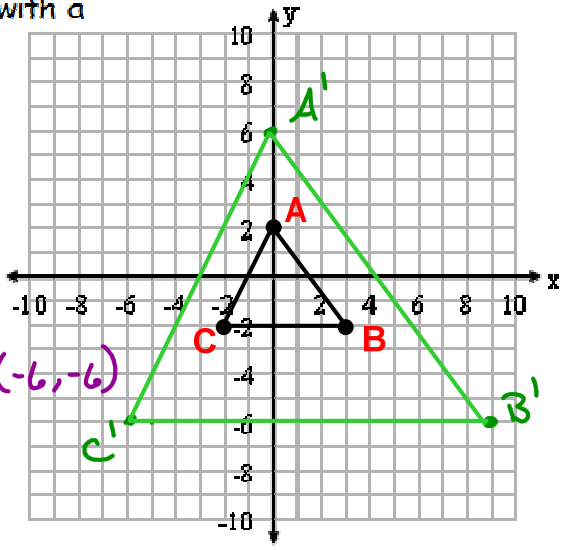
$\times 3$

$$B(3, -2) \rightarrow B'(9, -6)$$

$\times 3$

$$C(-2, -2) \rightarrow C'(-6, -6)$$

$\times 3$



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1.) Dilate the following triangle with a scale factor of 3.



ANSWER

