

REVIEW CHAPTER 9, 6.1

ROTATION

Rotate triangle ABC 90° about the origin.

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$A'(4, -6)$   
 $B'(2, -2)$   
 $C'(2, -2)$

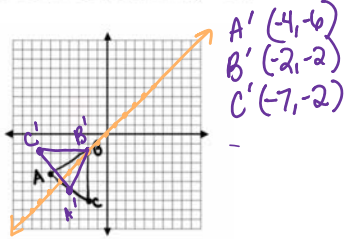
Rotate triangle ABC 180° about the point (2, -1)

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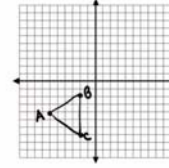
$A^*(8, 3)$   
 $B^*(4, 1)$   
 $C^*(4, 6)$   
 $A'(10, 2)$   
 $B'(6, 0)$   
 $C'(6, 5)$

Reflect triangle ABC over the line  $y = x$ .

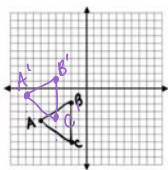
Reflect triangle ABC over the line  $y = x$ .



Perform the following translation:  $(x, y) \rightarrow (x-2, y+3)$



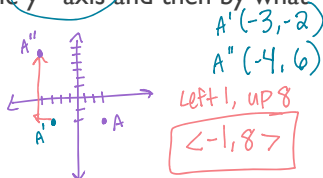
Perform the following translation:  $(x, y) \rightarrow (x-2, y+3)$



Left 2, up 3

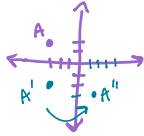
Point A  $(3, -2)$  was mapped to  $A''(-4, 6)$  first by a reflection across the  $y$ -axis and then by what translation vector?

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Point A is located at  $(-3, 2)$ . Reflect the point across the  $x$ -axis and then rotate 90 degrees.

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$$A''(2, -3)$$

Find the sum of the interior angles of a convex 16-gon.

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$$S_I = (n-2) \cdot 180$$

$$S_I = (16-2) \cdot 180 = \boxed{2,520}$$

Find the measure of each interior angle of a regular dodecagon.

Find the measure of each interior angle of a regular dodecagon.  $n=12$


$$I = \frac{(12-2) \cdot 180}{12} = \frac{1800}{12} = \boxed{150^\circ}$$

Name the regular polygon that has a measure of each exterior angle of  $40^\circ$ .

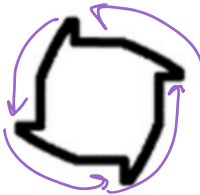
Name the regular polygon that has a measure of each exterior angle of  $40^\circ$ .

$\frac{360}{40} = 9$   
*nonagon*

WHAT IS THE ANGLE OF ROTATION AND THE ORDER OF SYMMETRY?






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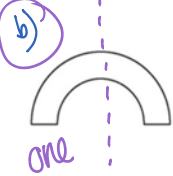
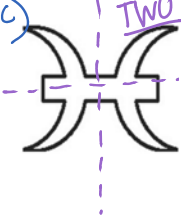


ORDER = 4  
 D.O.R. =  $\frac{360}{4} = 90^\circ$

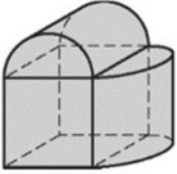
WHICH FIGURE HAS EXACTLY ONE LINE OF SYMMETRY?

a)  b)  c) 

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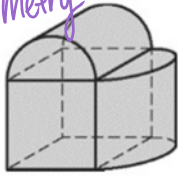
a)  *none*  
 b)  *one*  
 c)  *Two*

WHAT TYPE OF SYMMETRY DOES THE FIGURE HAVE?

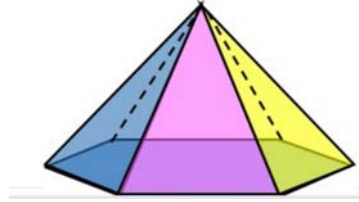


WHAT TYPE OF SYMMETRY DOES THE FIGURE HAVE?

*plane symmetry*



WHAT TYPE OF SYMMETRY DOES THE SHAPE BELOW HAVE?



WHAT TYPE OF SYMMETRY DOES THE SHAPE BELOW HAVE?

*plane and  
symmetry  
about an axis*



Two reflections over intersecting lines is the same thing as what single transformation?

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*Rotation*