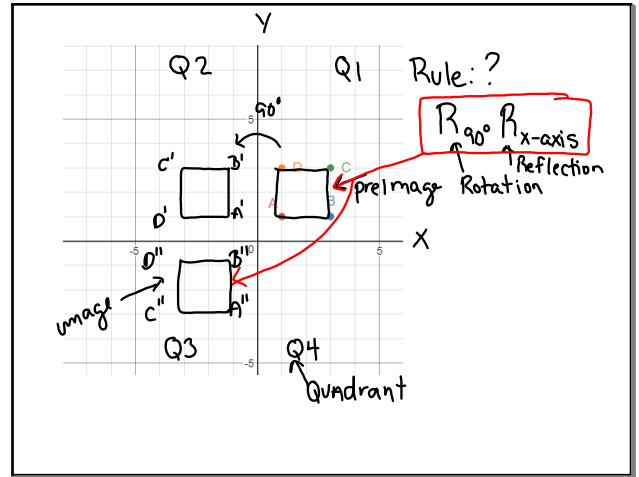


August 6, 2018

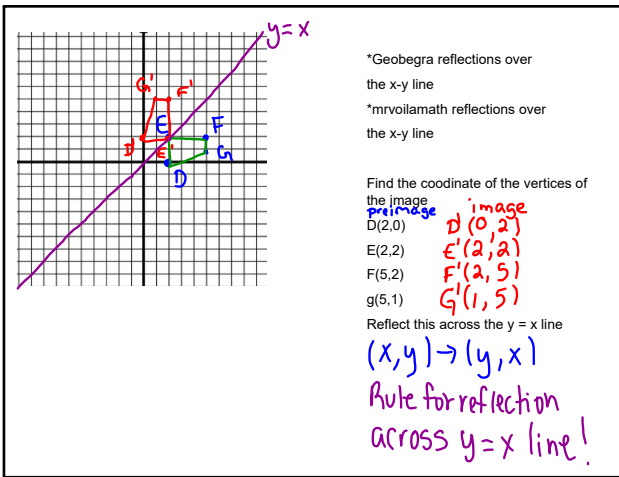
Rotate a square located at (1,1) (3,1) (3,3) and (1,3) in to quadrant 2, then reflect the square across the x-axis. Write a rule for the transformations.

Today -  
geogebra reflection  
find the  $x = y$  line & the  $x = -y$  line  
reflect over these lines  
Study Guide for tomorrow's quiz



Aug 6-7:45 AM

Aug 6-10:26 AM



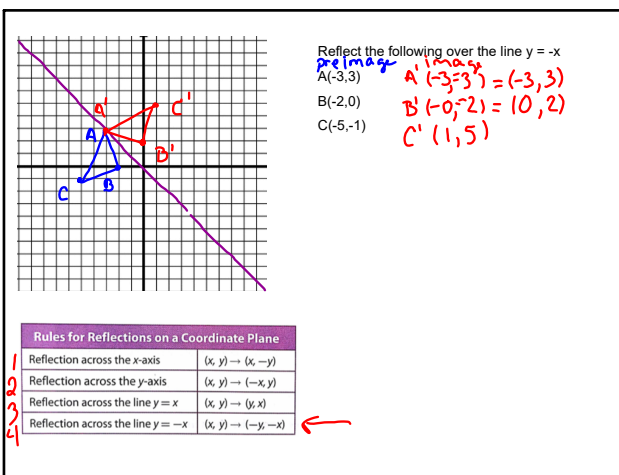
Aug 6-7:50 AM

**Explain 2 Drawing Reflections on a Coordinate Plane**

The table summarizes coordinate notation for reflections on a coordinate plane.

Rules for Reflections on a Coordinate Plane	
Reflection across the x-axis	$(x, y) \rightarrow (x, -y)$
Reflection across the y-axis	$(x, y) \rightarrow (-x, y)$
Reflection across the line $y = x$	$(x, y) \rightarrow (y, x)$
Reflection across the line $y = -x$	$(x, y) \rightarrow (-y, -x)$

Aug 6-11:13 AM



Aug 6-7:52 AM

Your Turn

$\triangle A'B'C'$  is the image of  $\triangle ABC$  under a reflection. On a coordinate grid, draw  $\triangle ABC$ ,  $\triangle A'B'C'$ , and the line of reflection.

12.

13.

Aug 6-7:55 AM

**Explain 4 Applying Reflections**

**Example 4**  
The figure shows one hole of a miniature golf course. It is not possible to hit the ball in a straight line from the tee T to the hole H. At what point should a player aim in order to make a hole in one?

Aug 6-8:00 AM

August 7, 2018

Eyeopener:  
Translate point (3,-7) using rule  $(x - 10, y + 5)$ .  
Where is the image?  
Write the vector for the mapping.

Aug 7-7:50 AM

**Study Guide!**

Unit 1 **Sc4** 1 - Translations & Reflections Name: \_\_\_\_\_

Describe the transformation.

- Given  $A = (5, 4)$ , describe the transformation if  $A' = (0, 0)$ .  $(x-5, y-4)$
- Given  $C = (3, -2)$ , describe the transformation if  $C' = (-12, 32)$ .  $(x+15, y+34)$
- Given  $A = (5, -5)$ , where would  $A'$  be if  $T(x-3, y+k)$  occurred?  $(2, -5)$
- Given  $A = (5, 4)$ , where would  $A'$  be if it was reflected over the line  $y = 0$ ?  $(5, -4)$
- Reflect across the line  $x = 0$ .  $\leftarrow$  **Y-axis**
- Reflect about the line  $y = 0$ .  $\leftarrow$  **X-axis**

Aug 6-11:30 AM

True or False: Circle the correct answer. 7-11

- True or False: Quadrilateral  $ABCD$  is the pre-image.  True
- True or False:  $SA \neq SA'$ .  True
- True or False: Quadrilateral  $ABCD$  is congruent to the quadrilateral  $A'B'C'D'$ .  True *same as*
- True or False: The transformation shown is not a reflection.  True
- True or False: Quadrilateral  $ABCD$  was transformed, to create quadrilateral  $A'B'C'D'$ .  True

Aug 6-1:50 PM

12 Write a translation rule to describe the transformation.  
 $T(x, y) = (x+4, y-1)$

13. Given  $G = (4, 3)$  and  $G' = (-1, 5)$ , what is the line of reflection? **y-axis**

14. A figure is transformed by  $T(x+4, y-2)$  and then transformation by  $T(x+1, y-5)$ . How does the original pre-image related to the final image after both transformations?  
 $T''(x+5, y-5)$

Aug 6-1:51 PM

**Rule  $(x+2, y+4)$**

15. Point  $P(2, 3)$  has been translated to  $P'(4, 7)$ . Where will point  $Z(4, 7)$  be located after the same translation?  
a.  $Z'(8, 9)$   
b.  $Z'(6, 11)$   
c.  $Z'(8, 5)$   
d.  $Z'(11, 8)$

16. Graph the composition of transformations:  $T(x-3, y)$ ,  $R_{90^\circ}$

5 Bonus Points: Factor and solve the following quadratic equation:  $x^2 - 3x - 4 = 0$

**Reflection**

$(x+1)(x-4) = 0$   
 $x+1=0$      $x-4=0$   
 $-1$      $+4$   
 $x=-1$      $x=4$

Aug 6-1:52 PM

Quiz

Bonus correction  
 $x^2 + 4x + 4 = 0$

Aug 7-7:52 AM

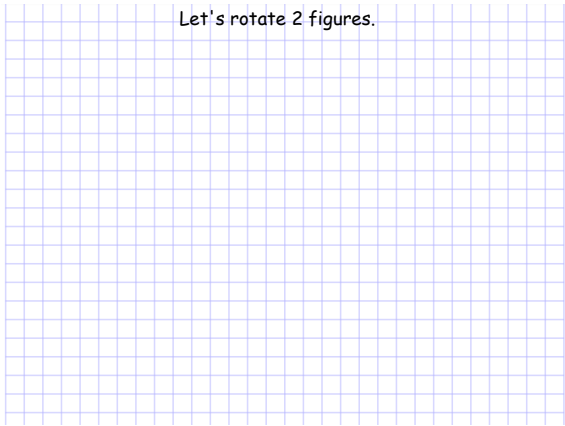
p 78 copy into your notebooks the first 5 lines of text

Let's investigate some Geometry rotations around the 'origin.'

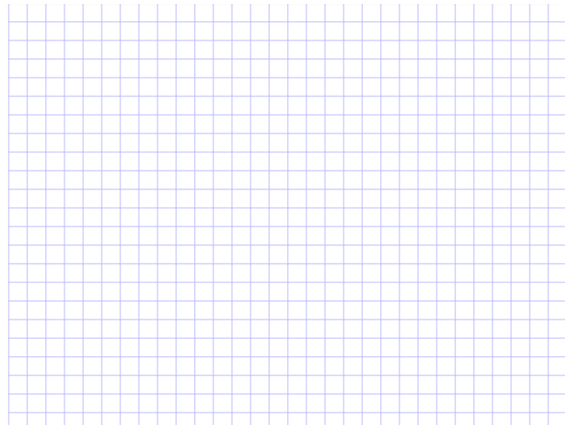
Geogebra, rotations

Aug 7-10:05 AM

Let's rotate 2 figures.



Aug 7-10:05 AM



Aug 7-10:05 AM

p80 rules for rotation

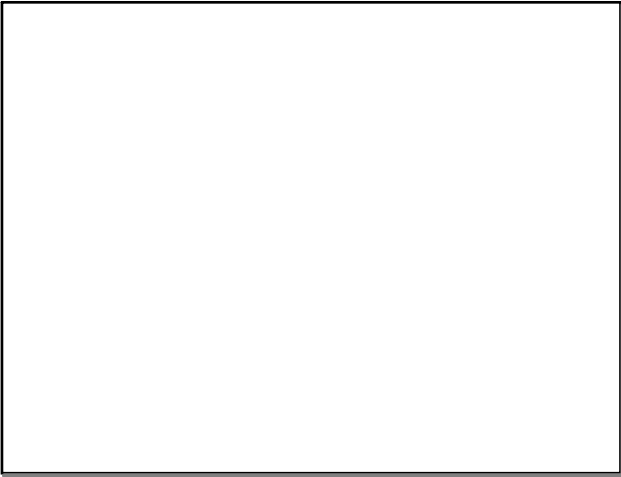
The table summarizes rules for rotations on a coordinate plane.

Rules for Rotations Around the Origin on a Coordinate Plane	
90° rotation counterclockwise	$(x, y) \rightarrow (-y, x)$
180° rotation	$(x, y) \rightarrow (-x, -y)$
270° rotation counterclockwise	$(x, y) \rightarrow (y, -x)$
360° rotation	$(x, y) \rightarrow (x, y)$

Aug 7-10:05 AM



Aug 7-10:05 AM



Aug 7-10:05 AM