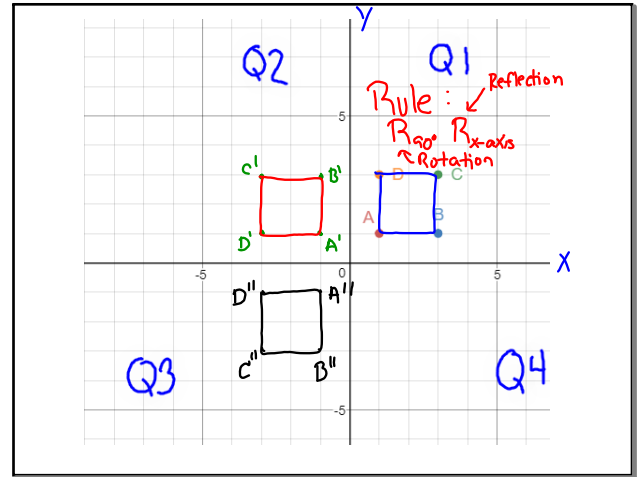


August 6, 2018

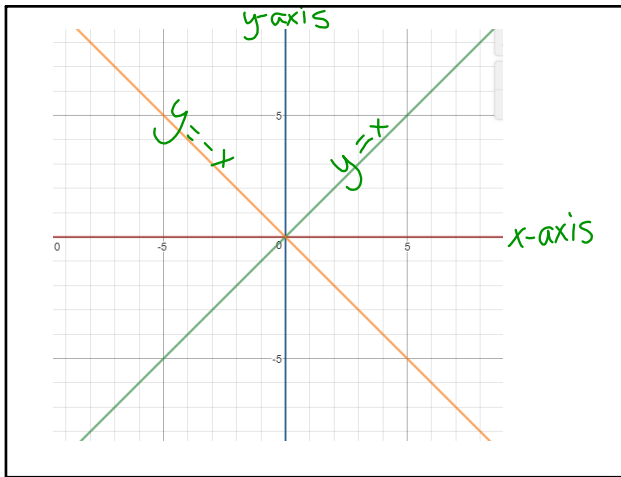
Rotate a square located at (1,1) (3,1) (3,3) and (1,3) in to quadrant 2, then reflect the square across the x-axis. Write a rule for the transformations.

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

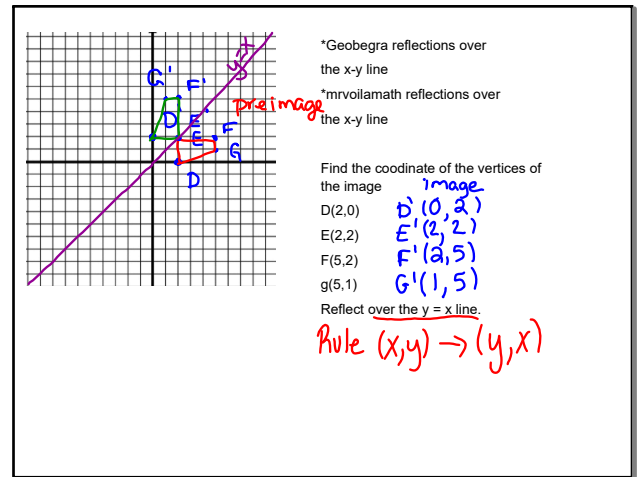


Aug 6-7:45 AM

Aug 6-11:57 AM



Aug 6-12:17 PM

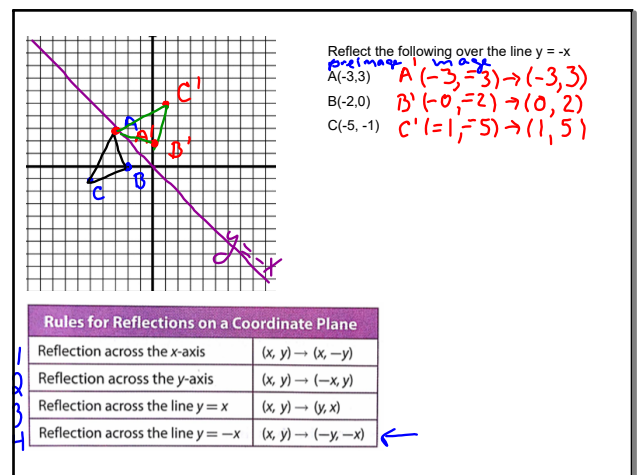


Aug 6-7:50 AM

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 $y = -x$	$(x, y) \rightarrow (-y, -x)$



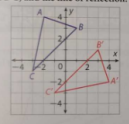
Rules for Reflections on a Coordinate Plane	
Reflection across the x-axis	$(x, y) \rightarrow (x, -y)$
Reflection across the y-axis	$(x, y) \rightarrow (-x, y)$
Reflection across the line $y = x$	$(x, y) \rightarrow (y, x)$
Reflection across the line $y = -x$	$(x, y) \rightarrow (-y, -x)$

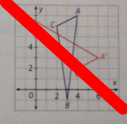
Aug 6-12:20 PM

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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. 

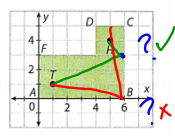

13. 

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?

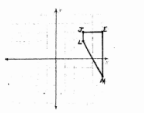
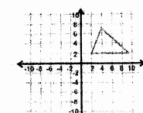



Aug 6-8:00 AM

Unit 1 **Translations & Reflections** Name _____

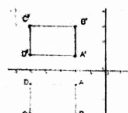
Describe the transformation.

- Given $A = (5, 4)$, describe the transformation if $A' = (0, 4)$.
- Given $C = (3, -2)$, describe the transformation if $C' = (-2, 3)$.
- Given $A = (3, -5)$, where would A' be if $T(x-2, y+4)$ occurred?
- Given $A = (5, 4)$, where would A' be if it was reflected over the line $y = 0$?
- Reflect across the line $x = 0$.
- Reflect about the line $y = 0$.

Aug 6-1:50 PM

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

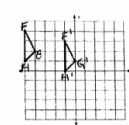


- True or False 7. Quadrilateral $ABCD$ is the pre-image.
- True or False 8. $\angle A \neq \angle A'$
- True or False 9. Quadrilateral $ABCD$ is congruent to the quadrilateral $A'B'C'D'$.
- True or False 10. The transformation shown is not a reflection.
- True or False 11. Quadrilateral $ABCD$ was reflected to create quadrilateral $A'B'C'D'$.

Aug 6-1:51 PM

12 Write a translation rule to describe the transformation.

$T(x, y) = (\quad , \quad)$



13. Given $G = (4, 3)$ and $G' = (-4, 3)$, what is the line of reflection? _____

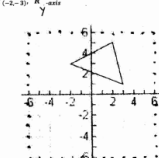
14. A figure is transformed by $T(x+4, y-2)$ and then transformation by $T(x+1, y-3)$. How does the original pre-image related to the final image after both transformations?

Aug 6-1:52 PM

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. $Z'(0, 5)$ d. $Z'(11, 6)$

16. Graph the composition of transformations: $T(-2, -3); R_{y\text{-axis}}$



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

Aug 6-1:52 PM