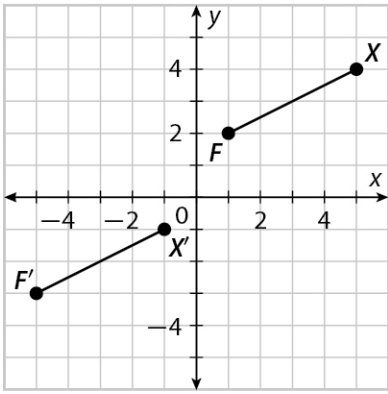


## Mod 2 Review

- What type of transformation is defined by the rule  $(x, y) \rightarrow (x + 4, y)$ ?
  - A reflection
  - A translation
  - A rotation
- What type of transformation is defined by the rule  $(x, y) \rightarrow (y, x)$ ?
  - A reflection
  - A translation
  - A rotation
- What type of transformation is defined by the rule  $(x, y) \rightarrow (-y, x)$ ?
  - A reflection
  - A translation
  - A rotation
- Find the image of point  $A(3, -1)$  under each transformation:
  - Translated along vector  $\langle -2, 4 \rangle$   $A'(\quad, \quad)$
  - Reflected across  $x$ -axis  $A'(\quad, \quad)$
  - Rotated  $90^\circ$  counterclockwise  $A'(\quad, \quad)$
  - Reflected across line  $y = x$   $A'(\quad, \quad)$
  - Rotated  $180^\circ$   $A'(\quad, \quad)$
  - Reflected across  $y$ -axis  $A'(\quad, \quad)$
  - Rotated  $270^\circ$   $A'(\quad, \quad)$
  - Translated along vector  $\langle 3, -2 \rangle$   $A'(\quad, \quad)$
  - Reflected across line  $y = -x$   $A'(\quad, \quad)$
- Write the coordinate notation for rotation by an angle of  $90^\circ$  CCW.  
 $(x, y) \rightarrow (\quad, \quad)$
- Write the coordinate notation for reflection over the line  $y = -x$ .  
 $(x, y) \rightarrow (\quad, \quad)$
- Write the coordinate notation for a translation that is 4 units to the right and 2 units down.  
 $(x, y) \rightarrow (\quad, \quad)$

## Mod 2 Review

8.

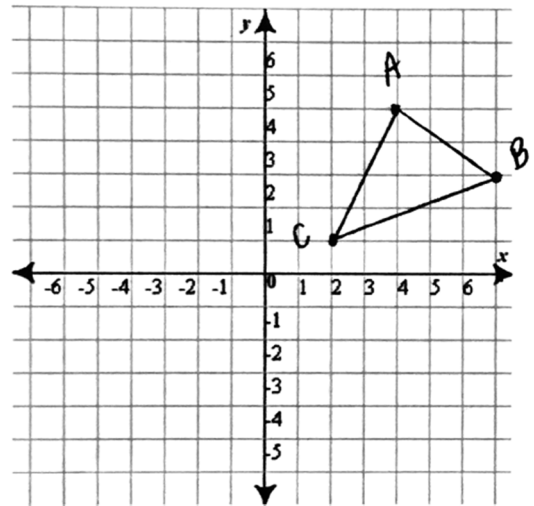


What is the component form of the vector that maps  $\overline{XF}$  to  $\overline{X'F'}$ ?

- A  $\langle 6, 5 \rangle$
- B  $\langle -6, -5 \rangle$
- C  $\langle -5, -6 \rangle$

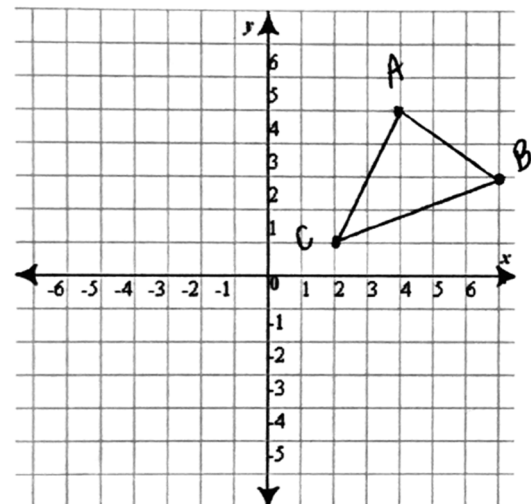
9. Use  $\triangle ABC$  to find the following:

- a. Find the coordinates for the image after  $\triangle ABC$  is translated along the vector  $\langle -8, 2 \rangle$ .
- b. Graph the image coordinates (don't forget to include primes).
- c. Write the transformation in coordinate notation.



10. Use  $\triangle ABC$  to find the following:

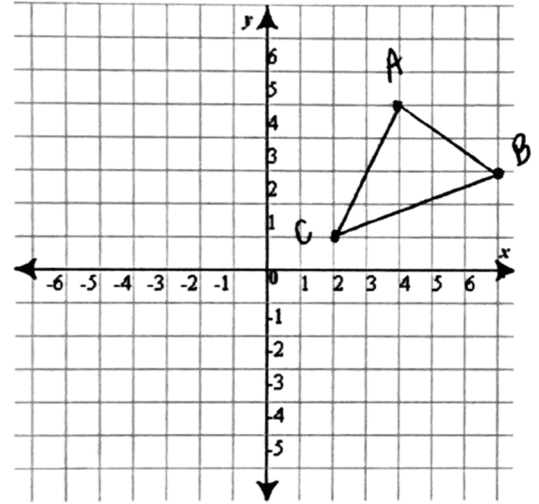
- a. Find the coordinates for the image after  $\triangle ABC$  is reflected over the  $y$ -axis.
- b. Graph the image coordinates (don't forget to include primes).
- c. Write the transformation in coordinate notation.



## Mod 2 Review

11. Use  $\triangle ABC$  to find the following:

- a. Find the coordinates for the image after  $\triangle ABC$  is rotated  $270^\circ$  CCW.
- b. Graph the image coordinates (don't forget to include primes).
- c. Write the transformation in coordinate notation.



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 Rotations Around the Origin on a Coordinate Plane	
$90^\circ$ rotation counterclockwise	$(x, y) \rightarrow (-y, x)$
$180^\circ$ rotation	$(x, y) \rightarrow (-x, -y)$
$270^\circ$ rotation counterclockwise	$(x, y) \rightarrow (y, -x)$