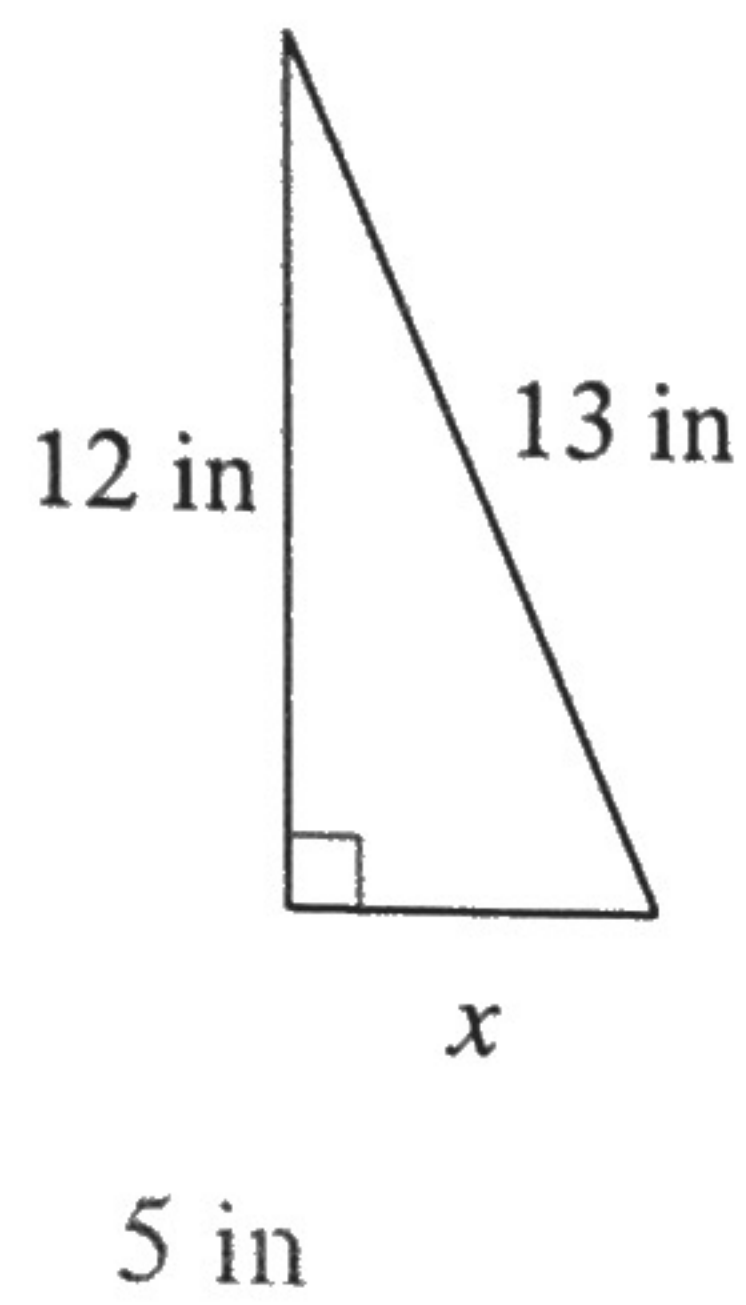


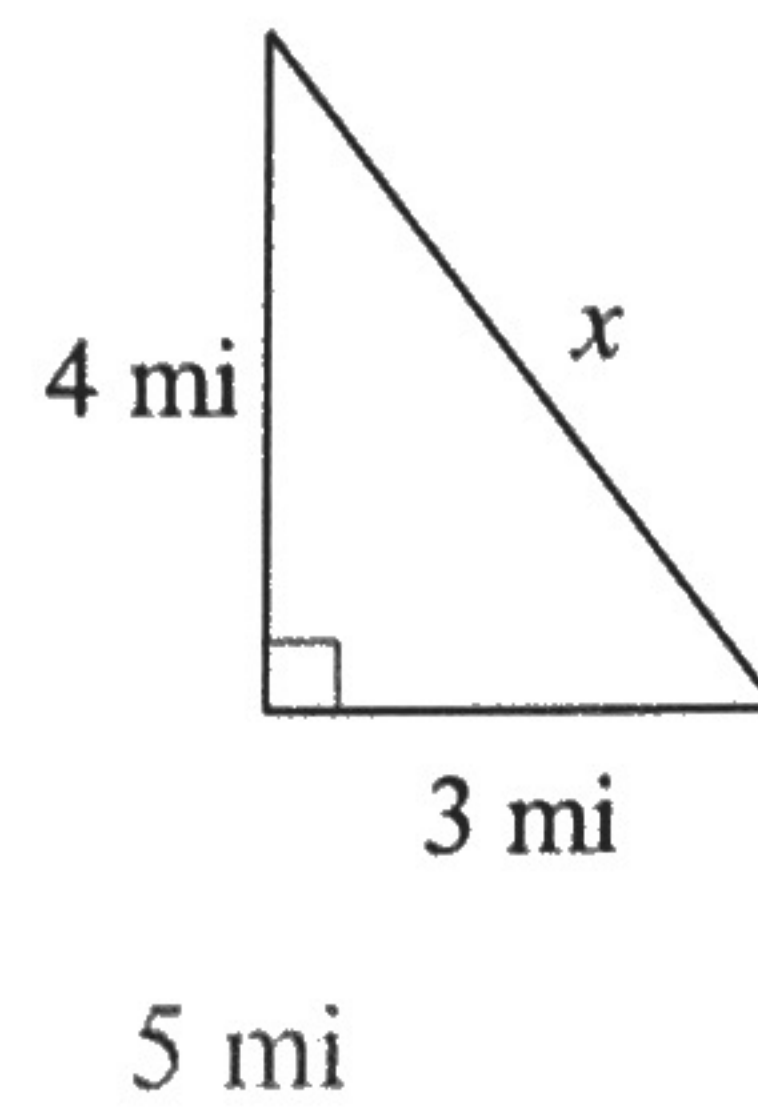
The Pythagorean Theorem and Its Converse

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

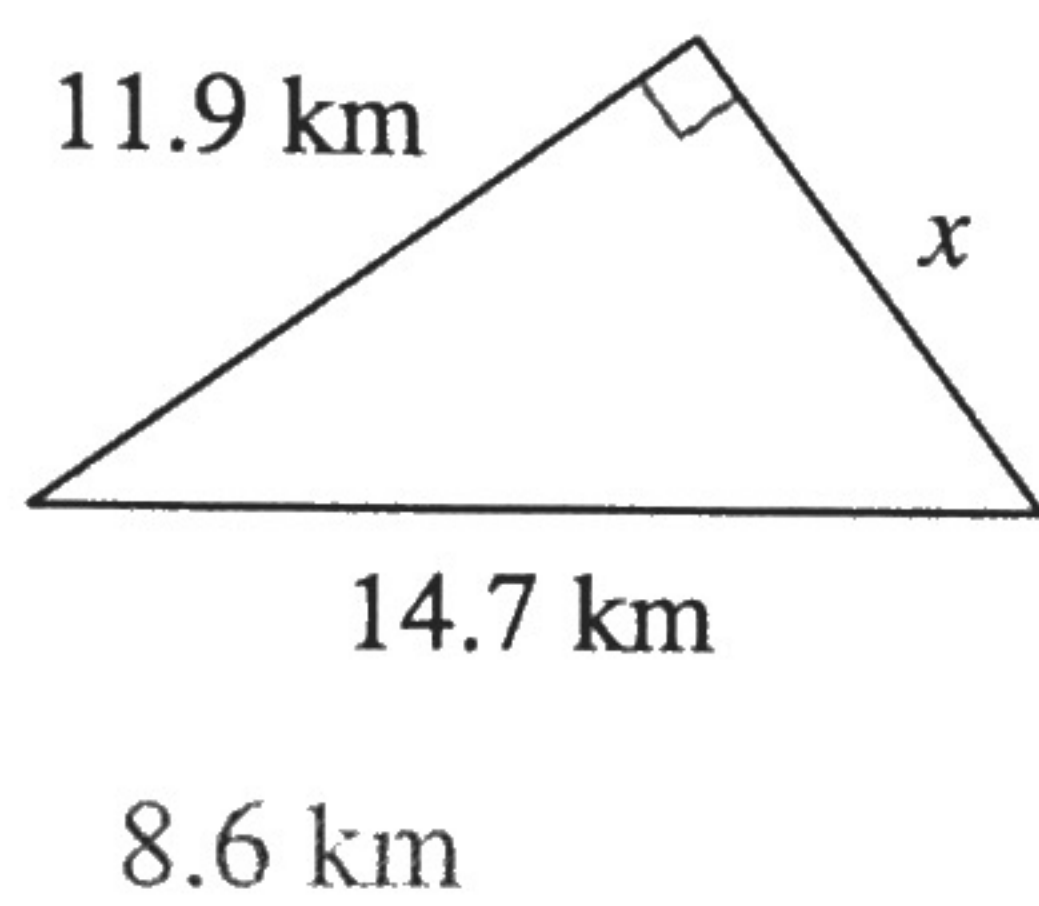
1)



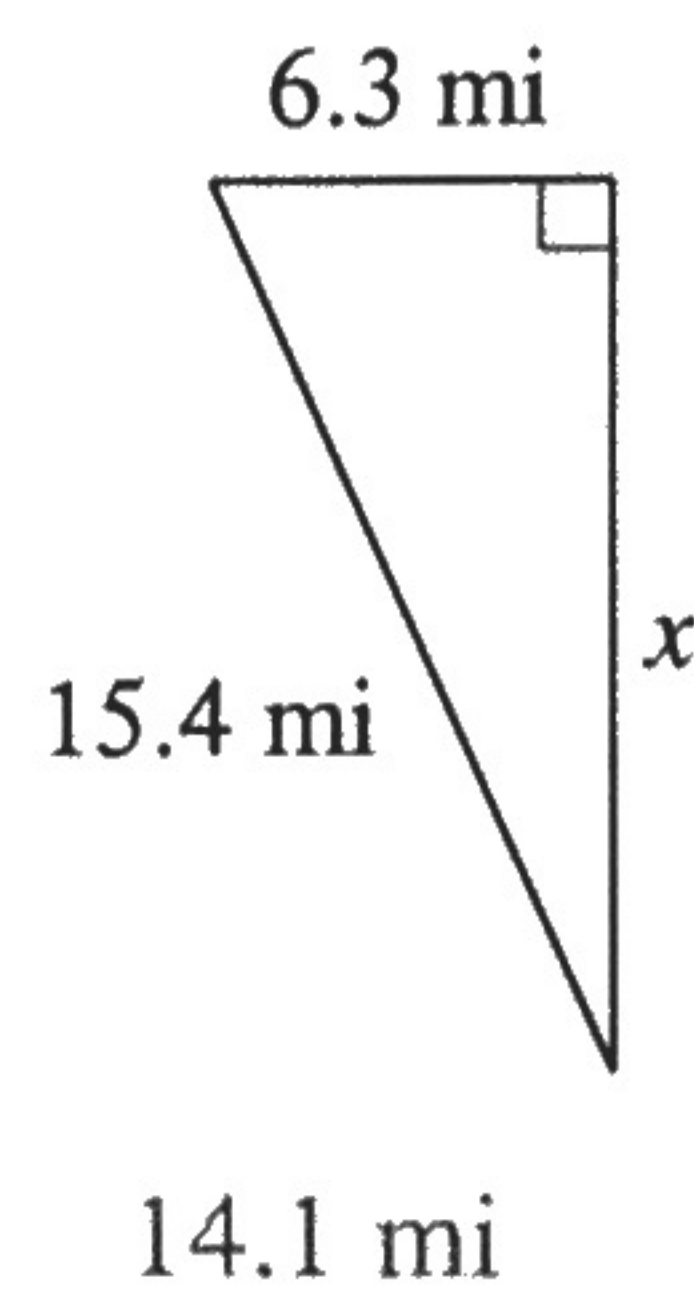
2)



3)

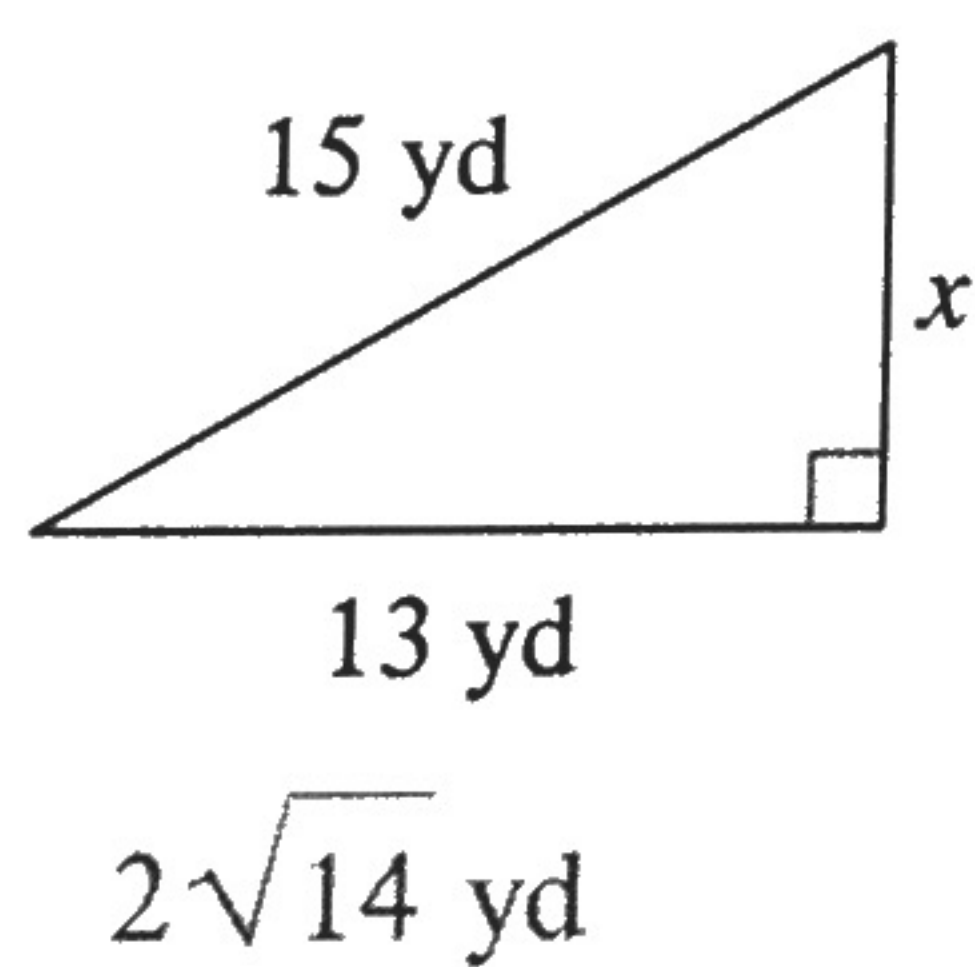


4)

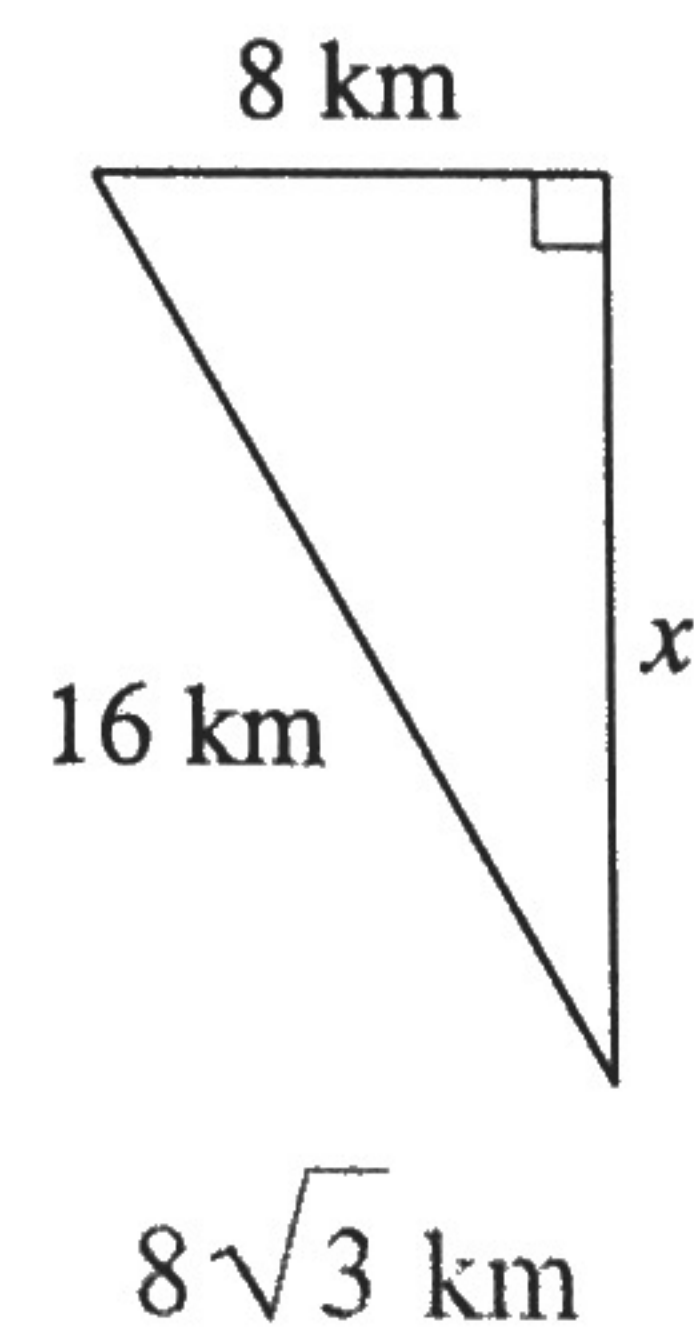


Find the missing side of each triangle. Leave your answers in simplest radical form.

5)



6)



Find the missing side of each right triangle. Side c is the hypotenuse. Sides a and b are the legs. Leave your answers in simplest radical form.

7) $a = 11$ m, $c = 15$ m

$2\sqrt{26}$ m

8) $b = \sqrt{6}$ yd, $c = 4$ yd

$\sqrt{10}$ yd

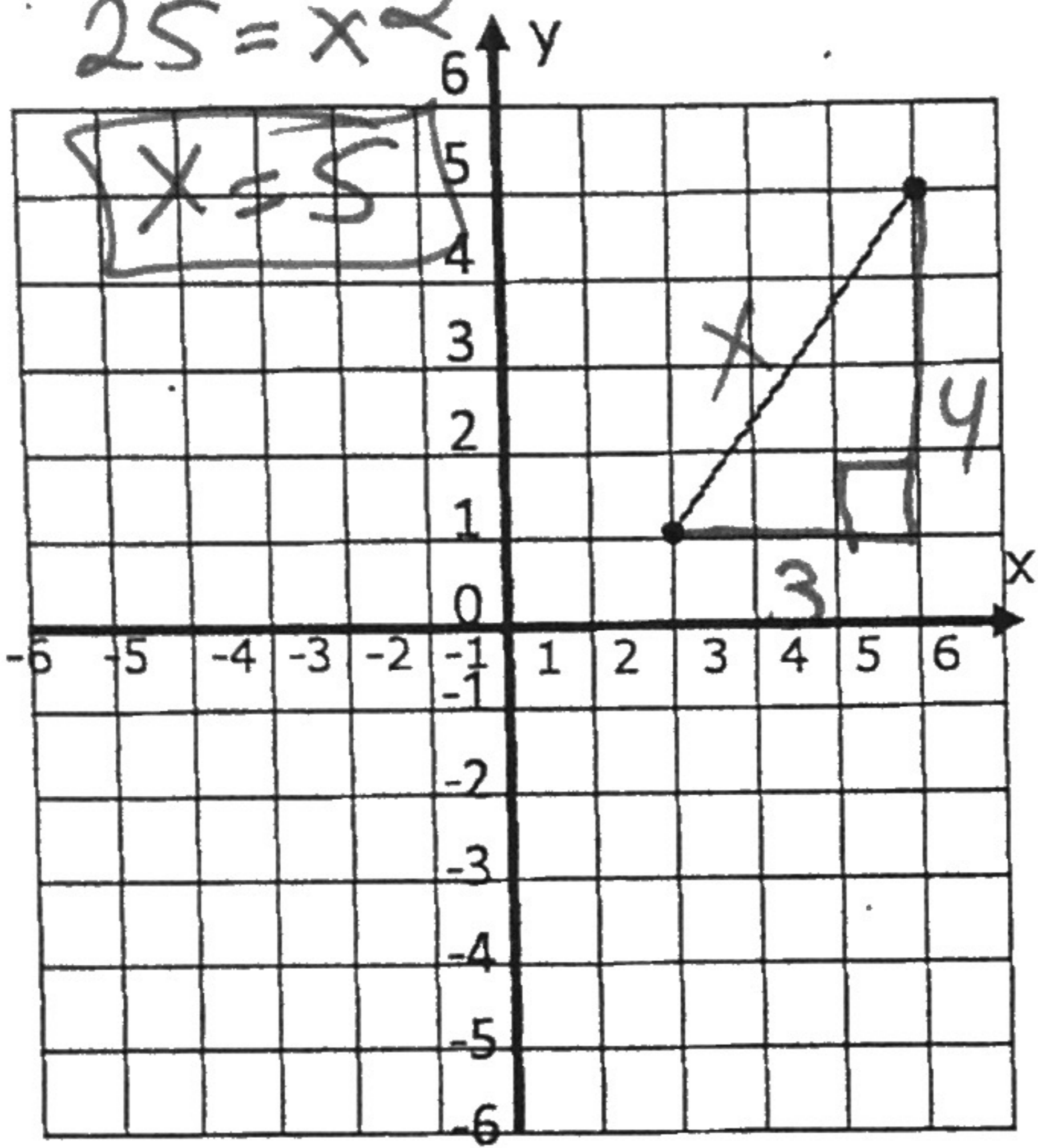
Name _____

Date _____

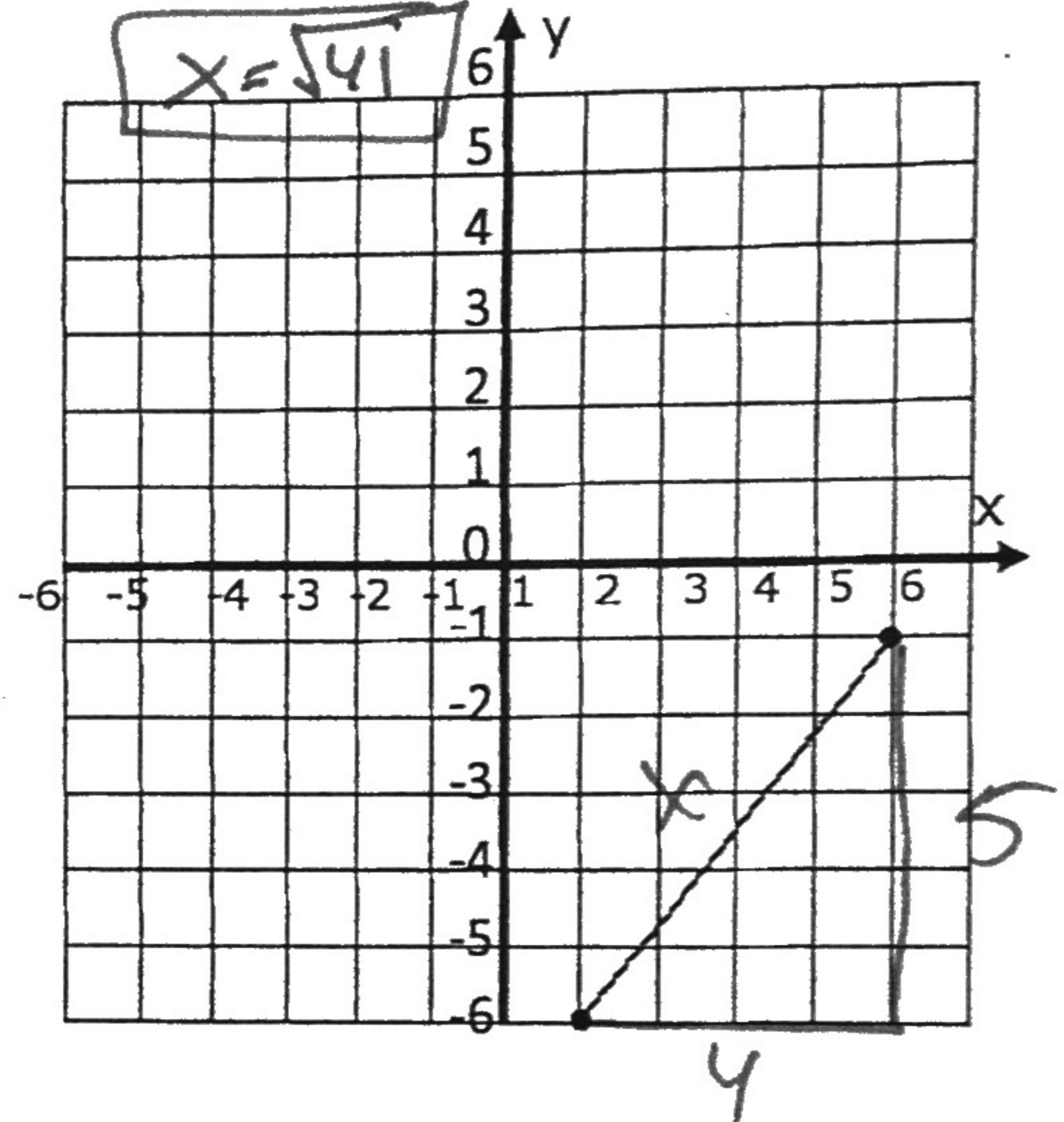
Pythagorean Theorem On Coordinate Systems - Independent Worksheet

Find the distance between all the points listed below.

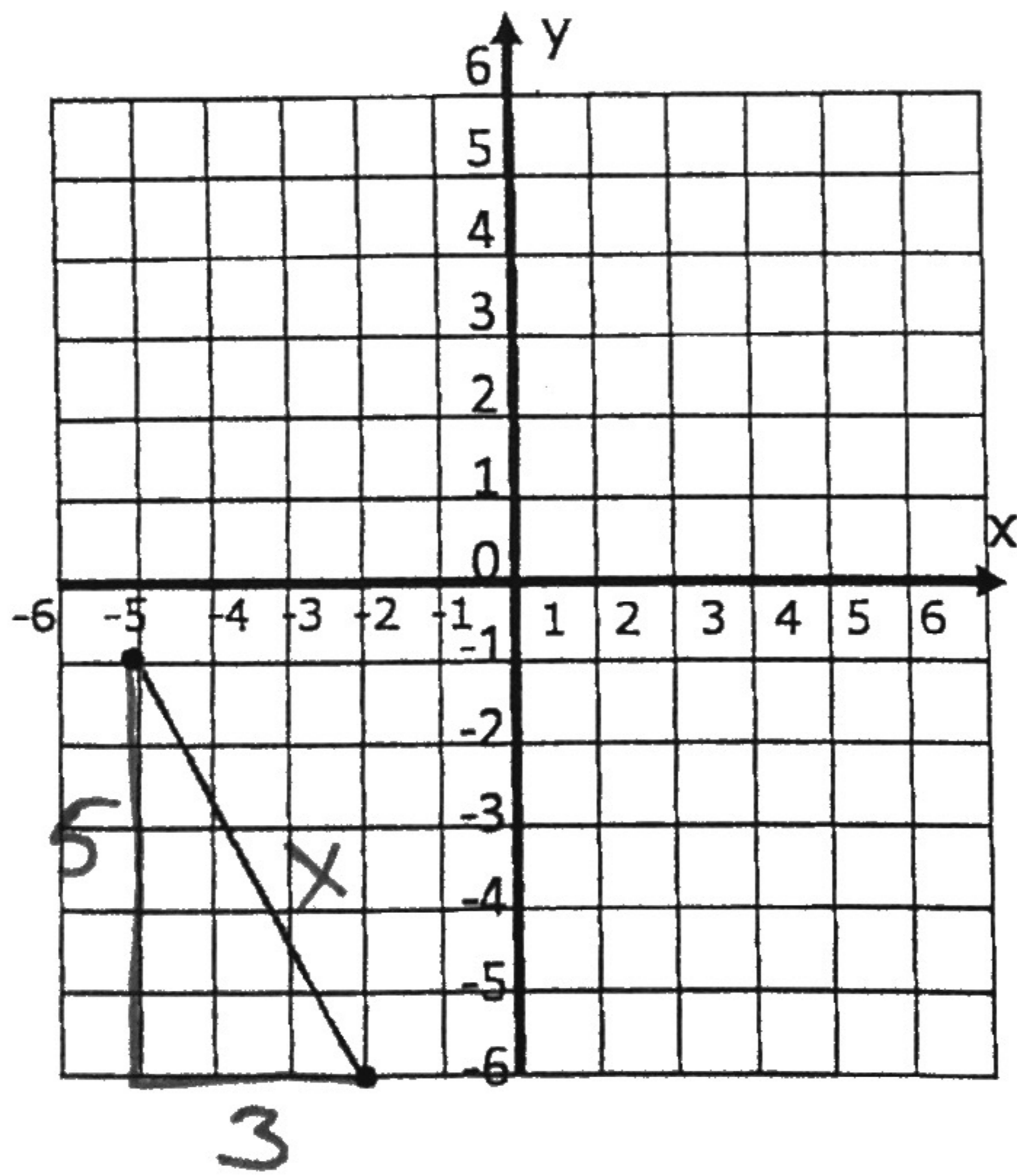
1. $3^2 + 4^2 = x^2$
 $9 + 16 = x^2$
 $25 = x^2$



3. $4^2 + 5^2 = x^2$
 $16 + 25 = x^2$
 $41 = x^2$



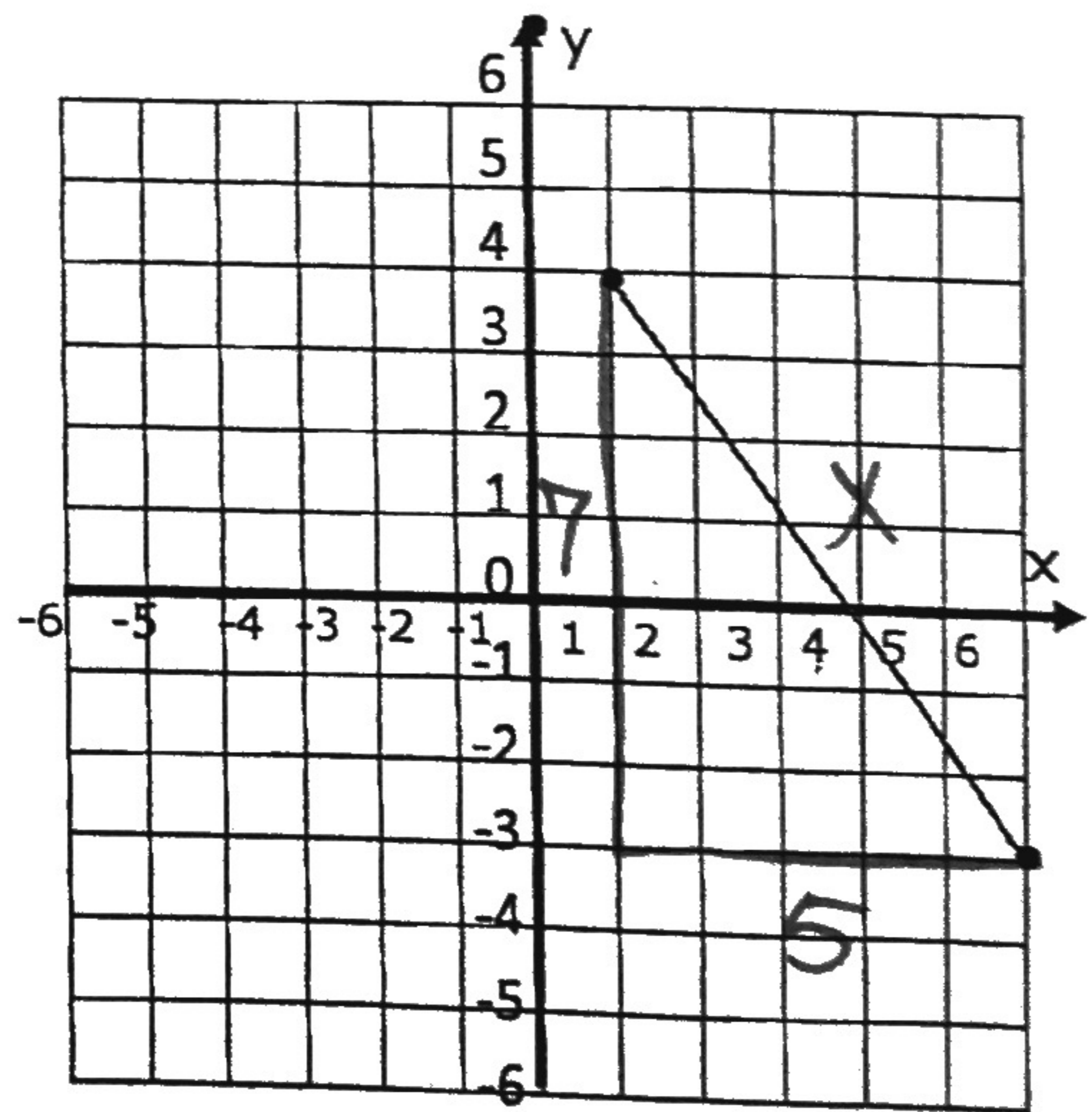
2.



$3^2 + 5^2 = x^2$
 $9 + 25 = x^2$
 $34 = x^2$

$x = \sqrt{34}$

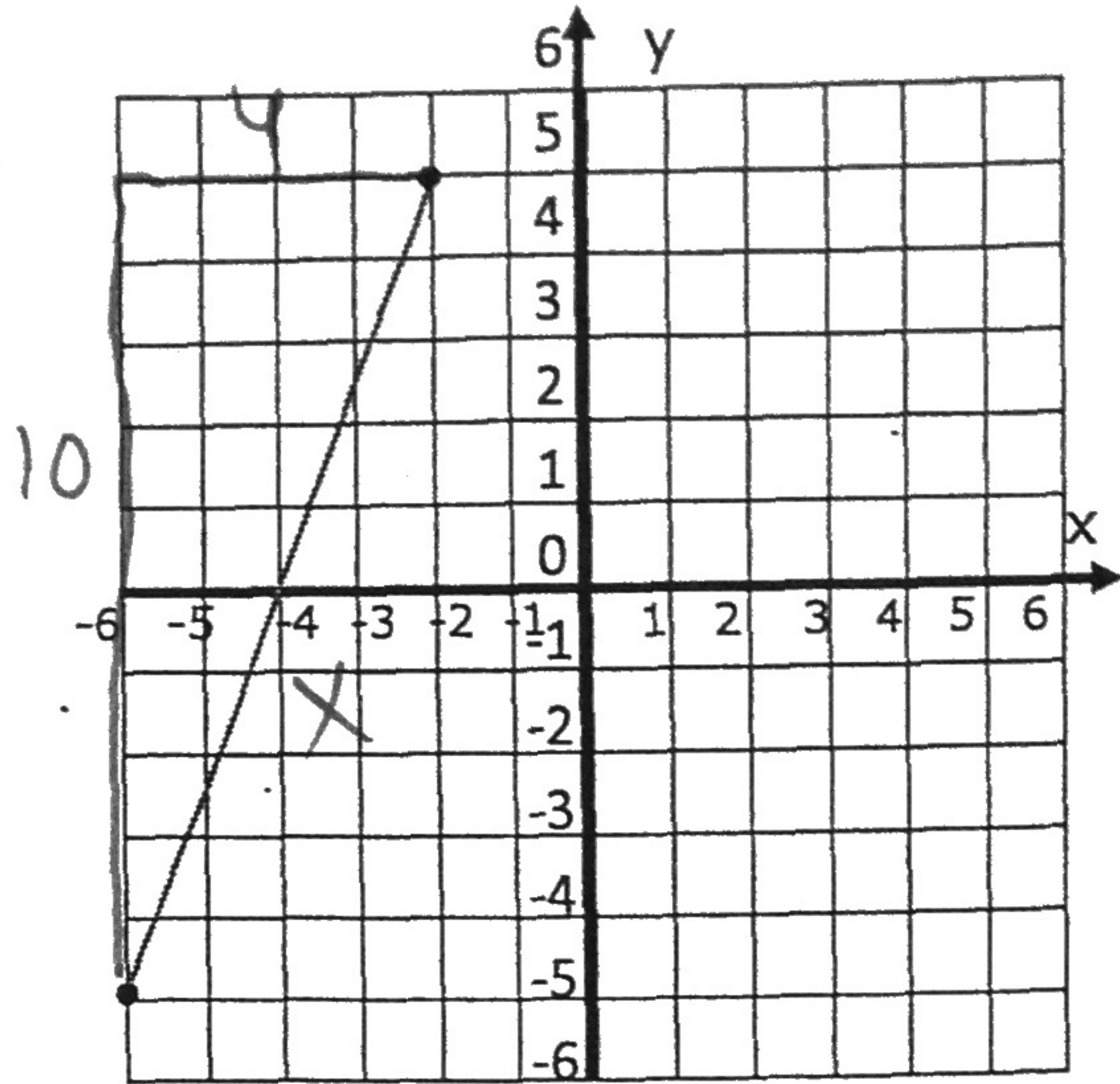
4.



$5^2 + 7^2 = x^2$
 $25 + 49 = x^2$
 $74 = x^2$

$x = \sqrt{74}$

5.



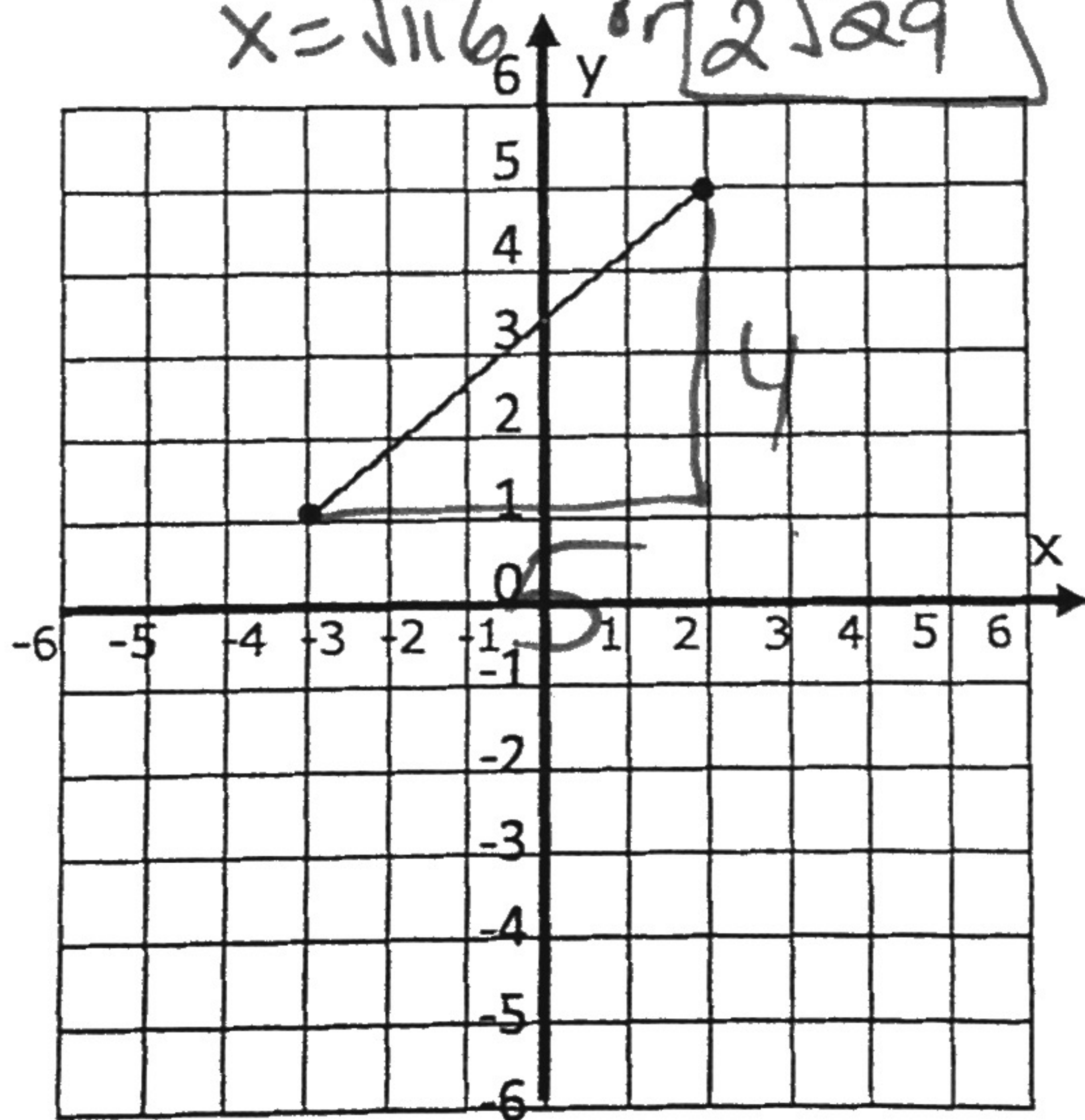
$$10^2 + 4^2 = x^2$$

$$100 + 16 = x^2$$

$$116 = x^2$$

6. ~~Find the distance between (-6, -5) and (-2, 4).~~

$x = \sqrt{116}$ or $2\sqrt{29}$

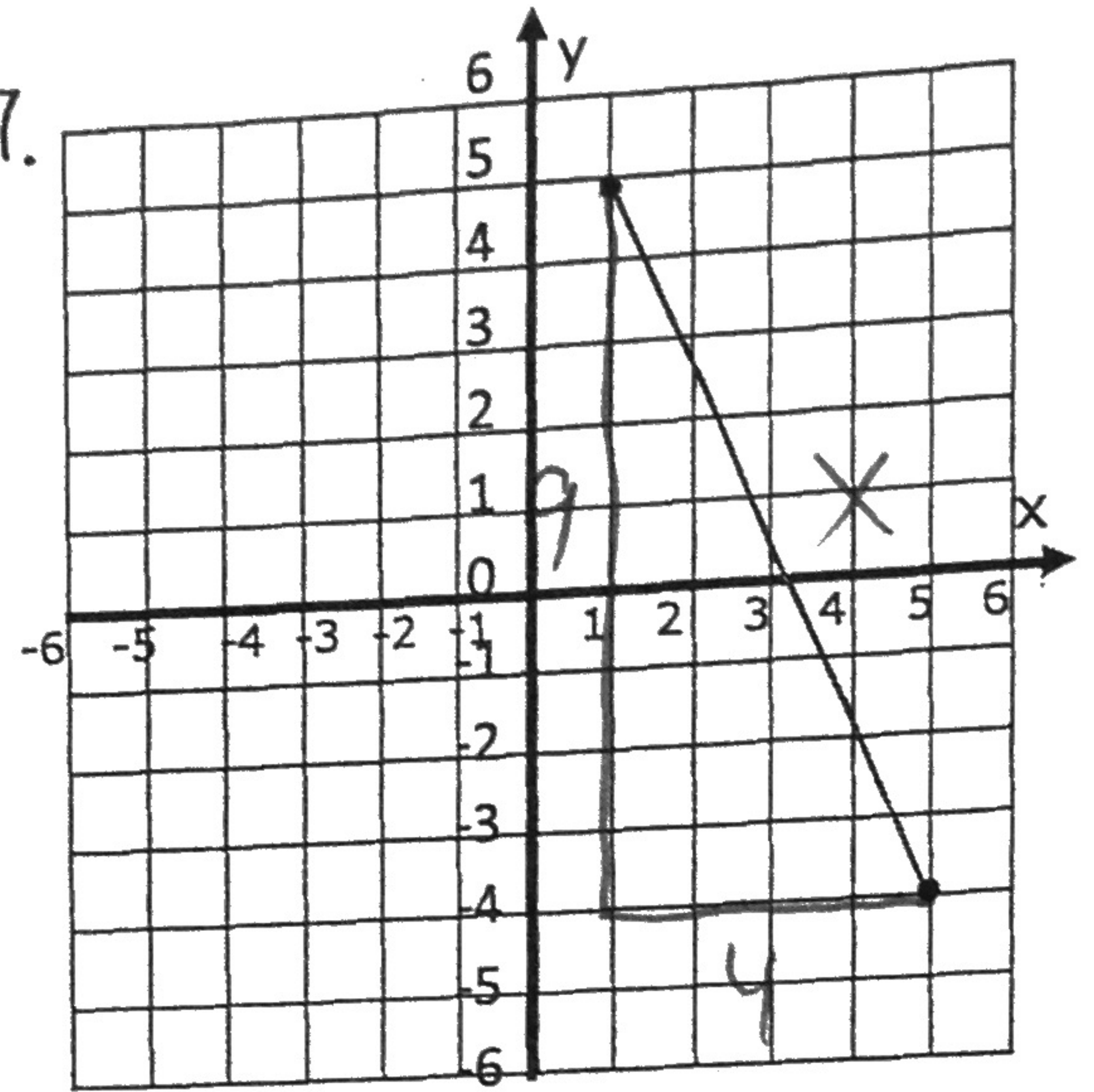


$$4^2 + 5^2 = x^2$$

$$16 + 25 = x^2$$

$x = \sqrt{41}$

7.



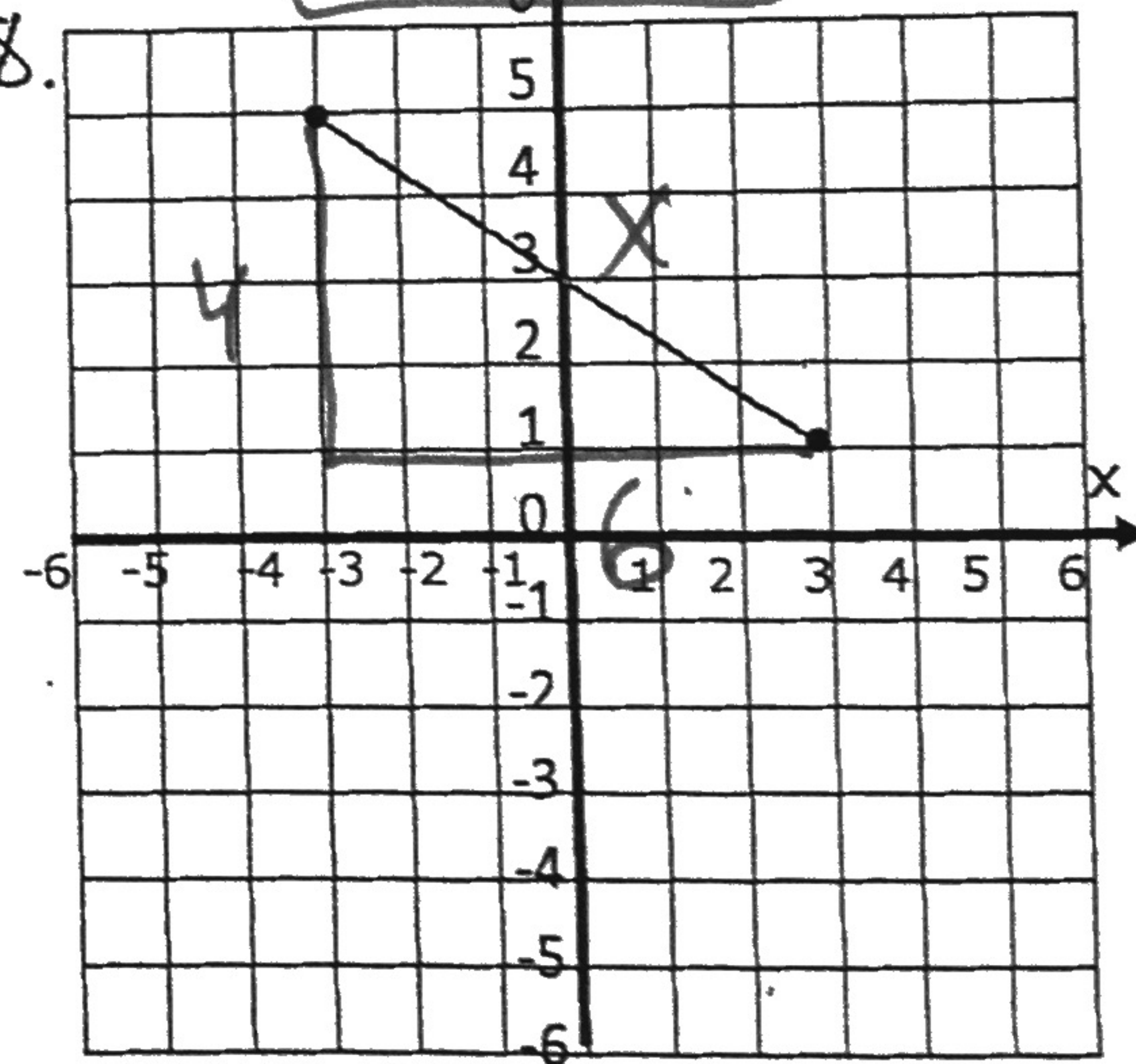
$$9^2 + 4^2 = x^2$$

$$81 + 16 = x^2$$

$$97 = x^2$$

$x = \sqrt{97}$

8.



$$4^2 + 6^2 = x^2$$

$$16 + 36 = x^2$$

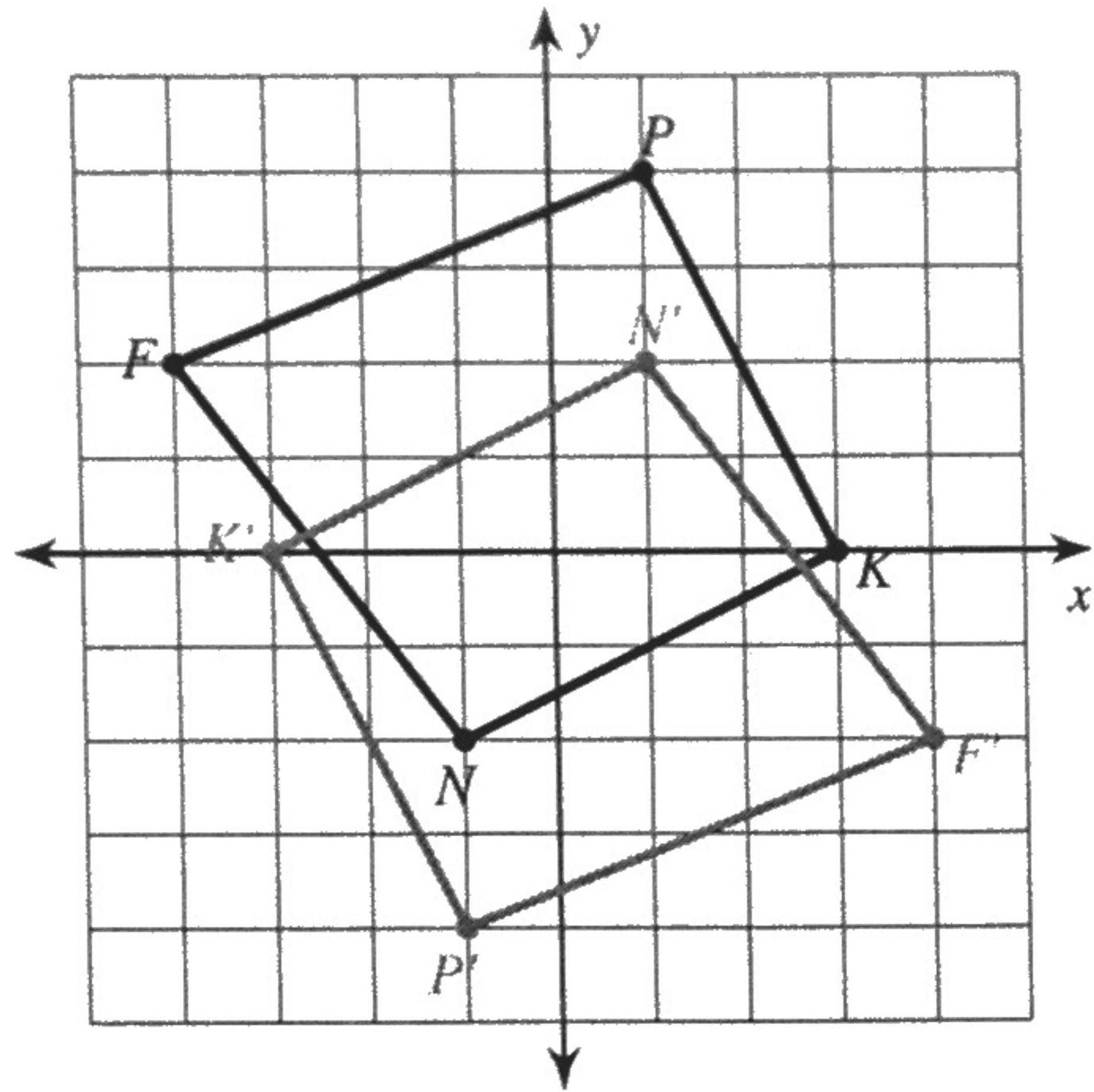
$x = \sqrt{52}$



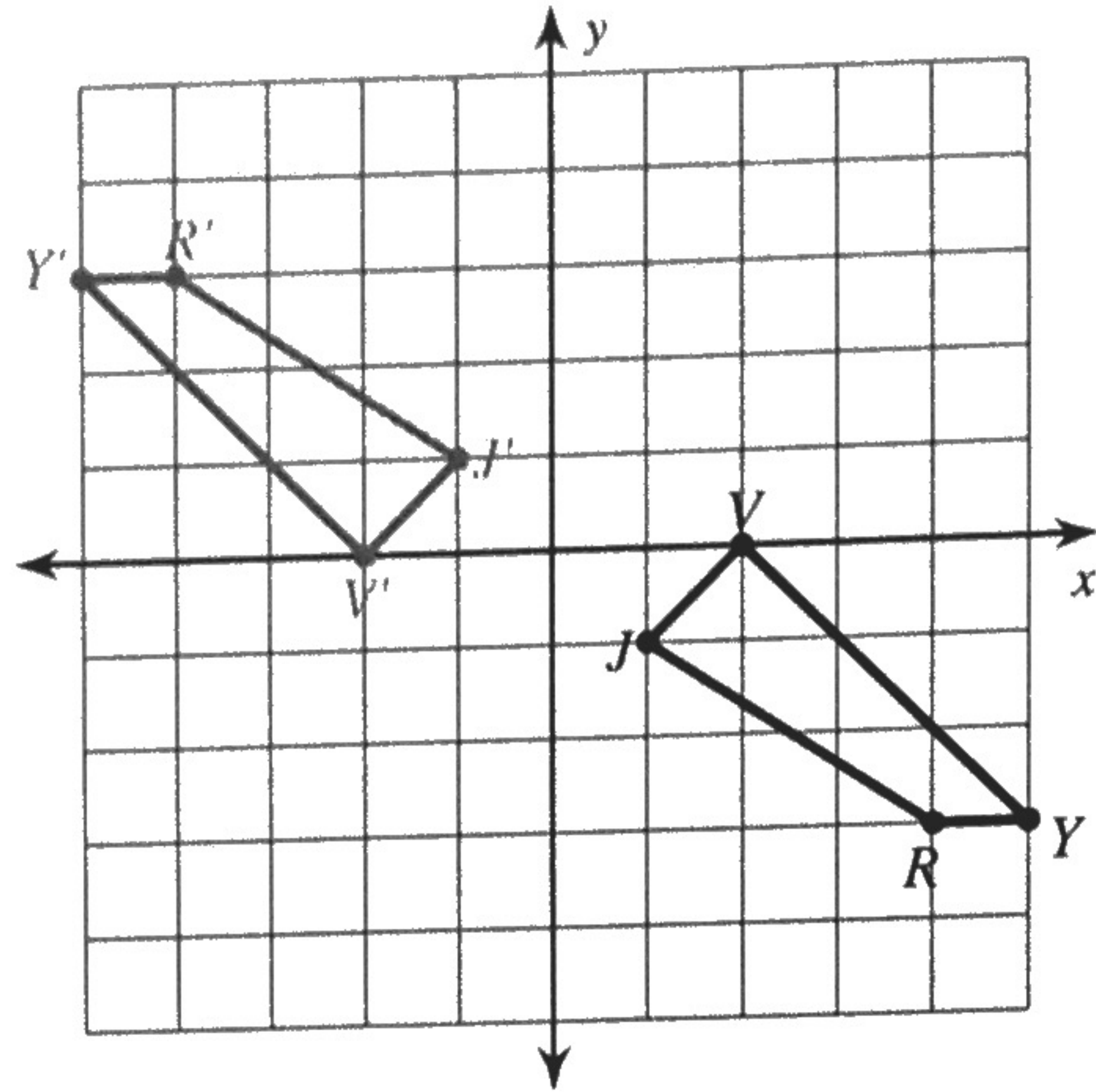
Rotations

Graph the image of the figure using the transformation given.

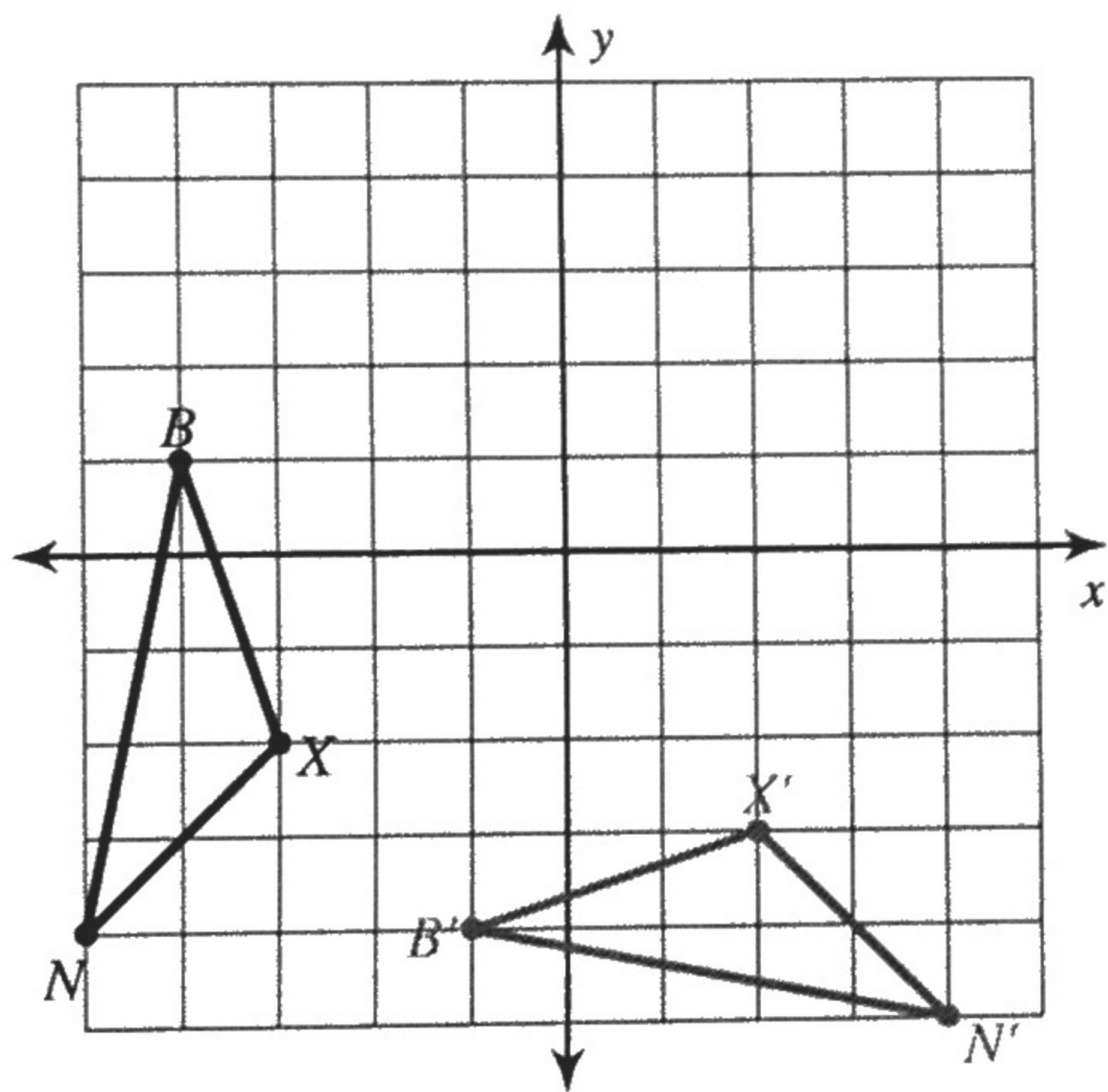
1) rotation 180° about the origin



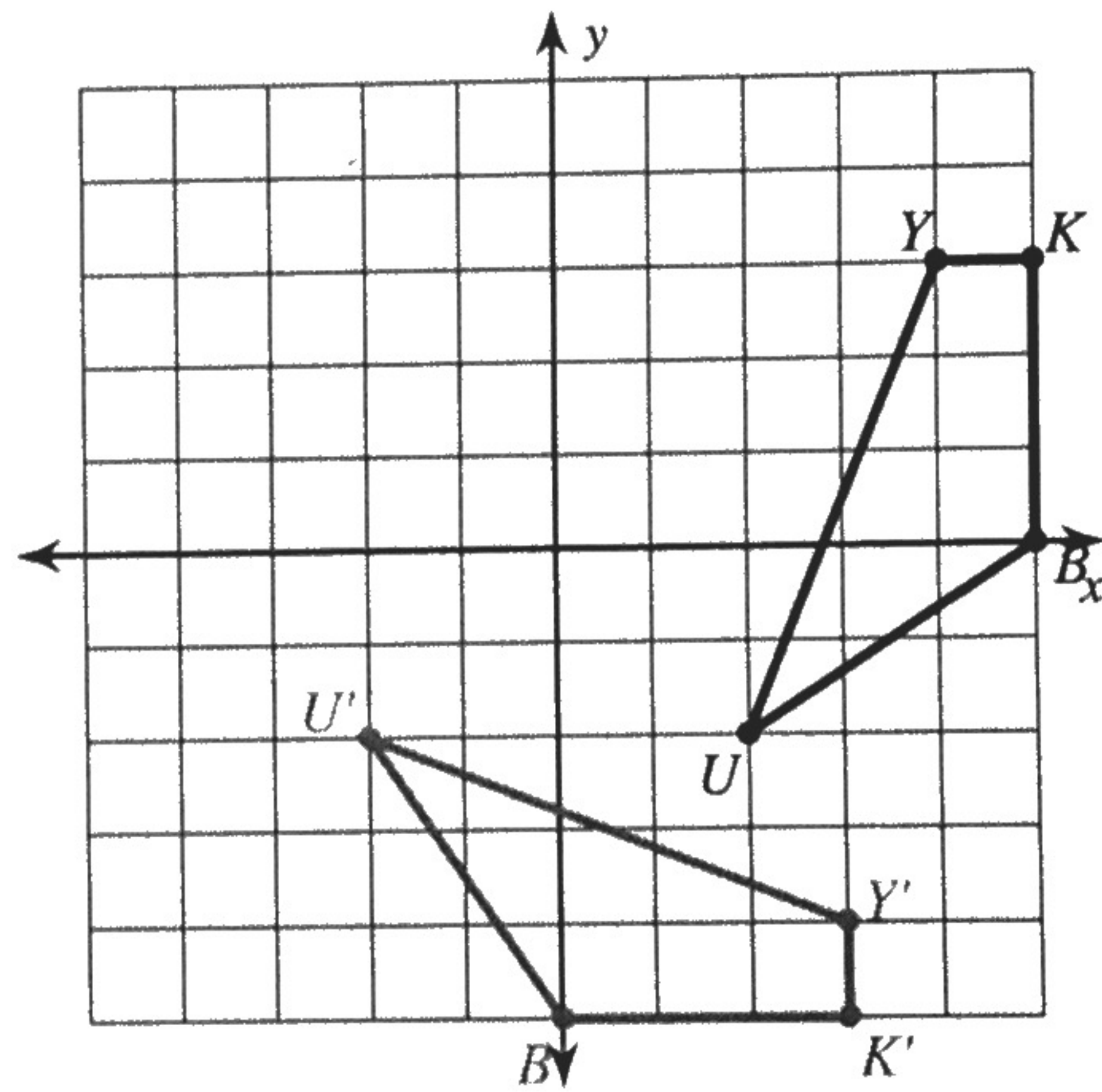
2) rotation 180° about the origin



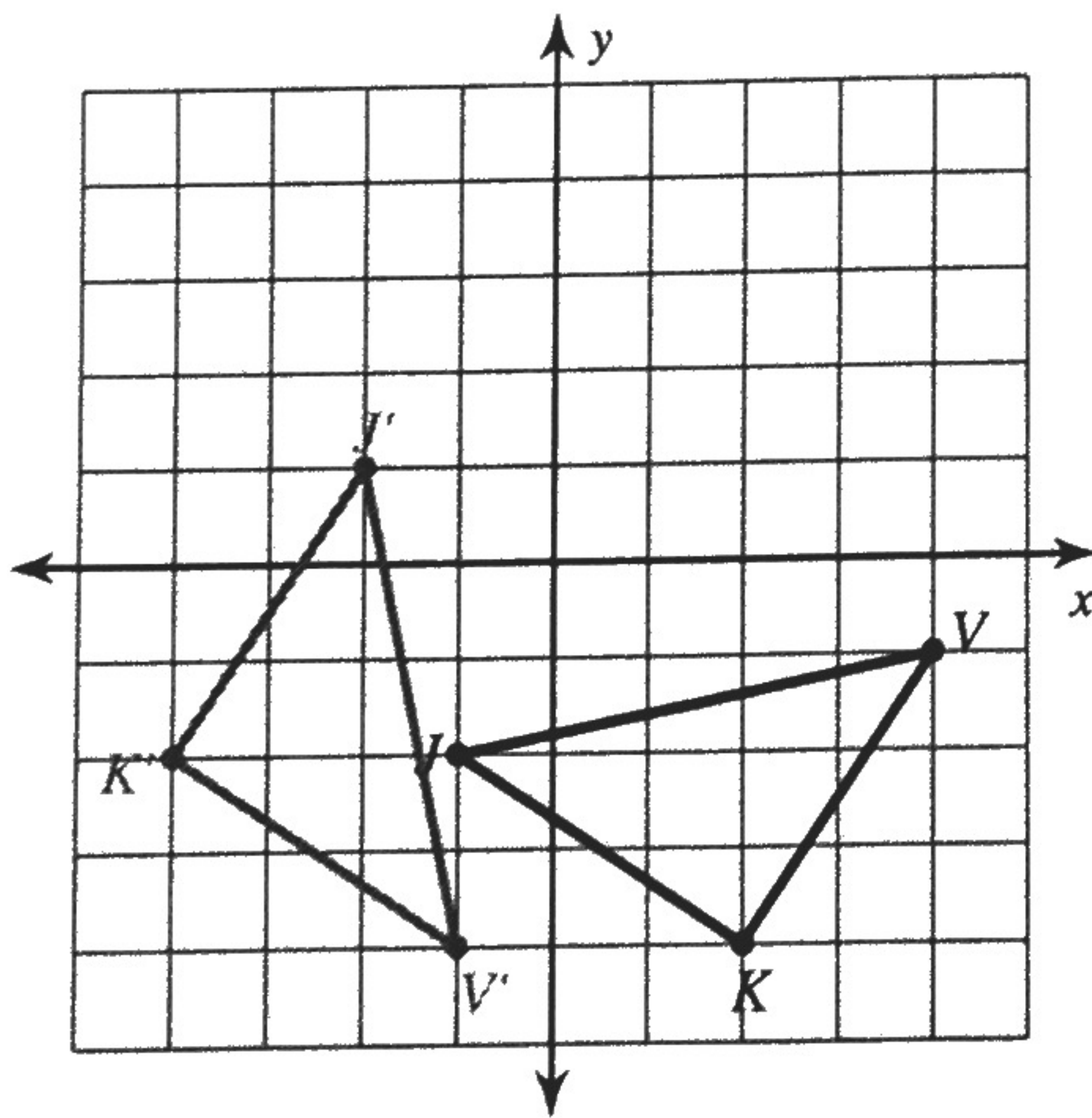
3) rotation 90° counterclockwise about the origin



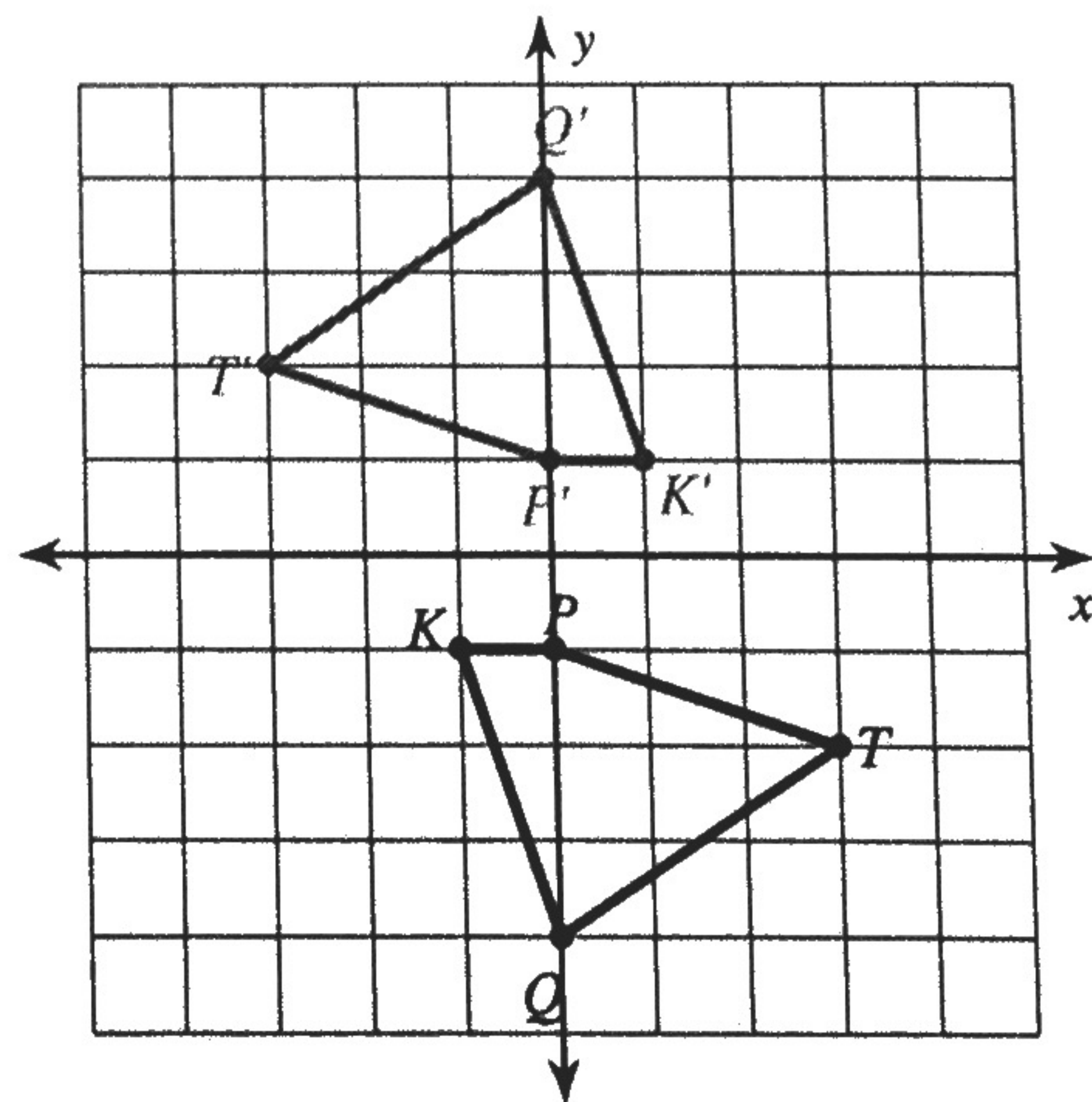
4) rotation 90° clockwise about the origin



5) rotation 90° clockwise about the origin



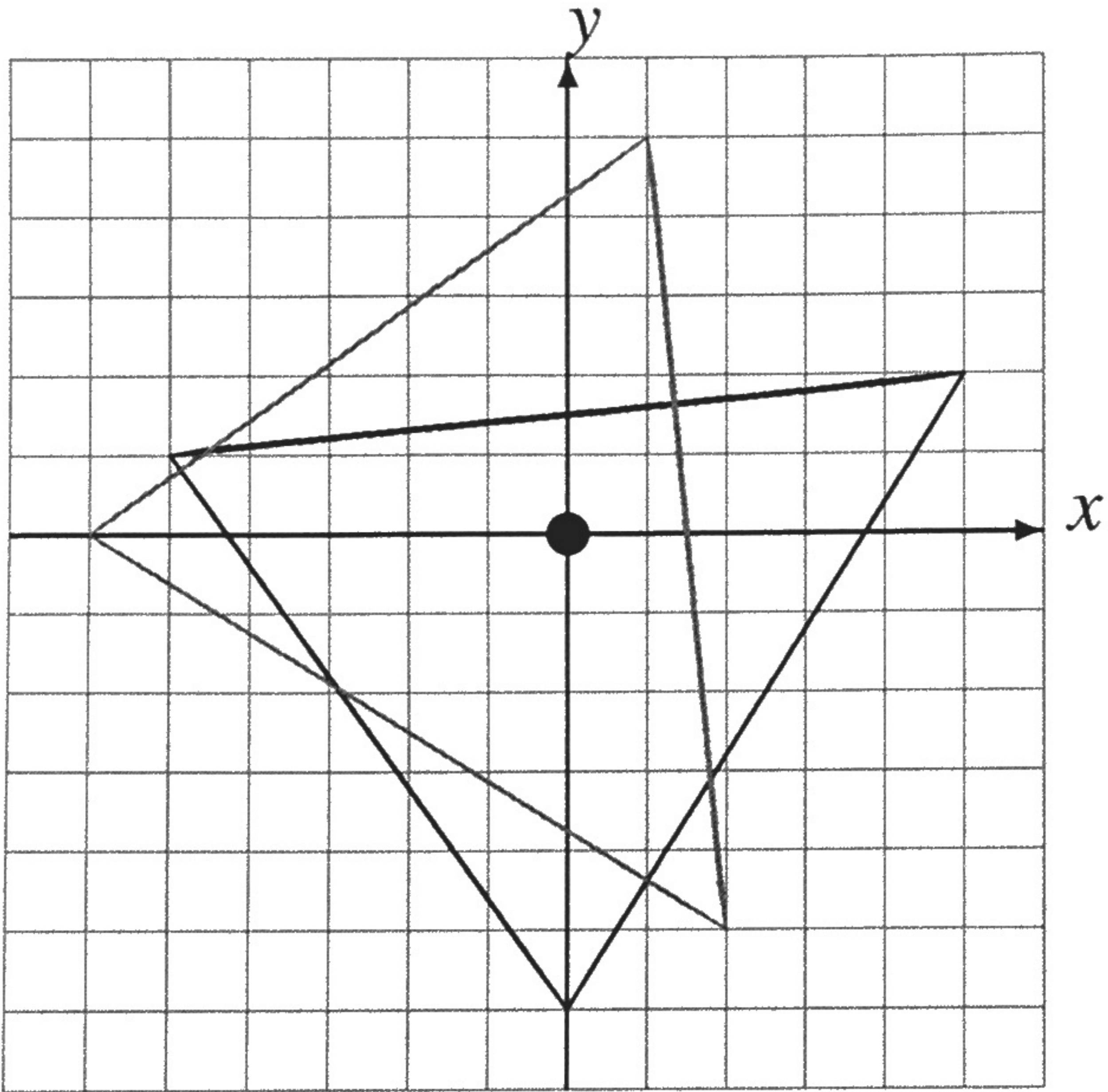
6) rotation 180° about the origin



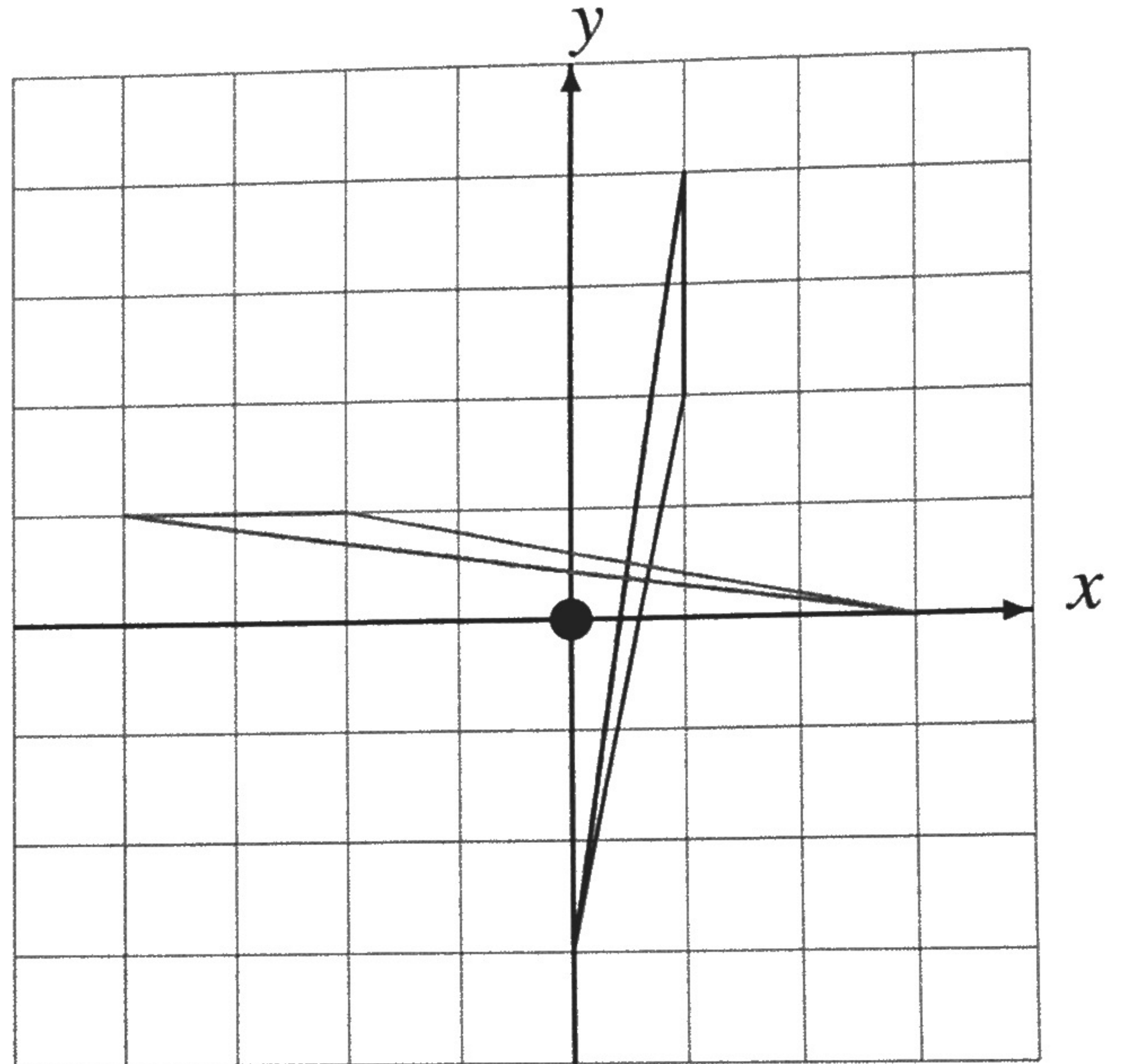
Rotations (A) Answers

Draw the rotated image.

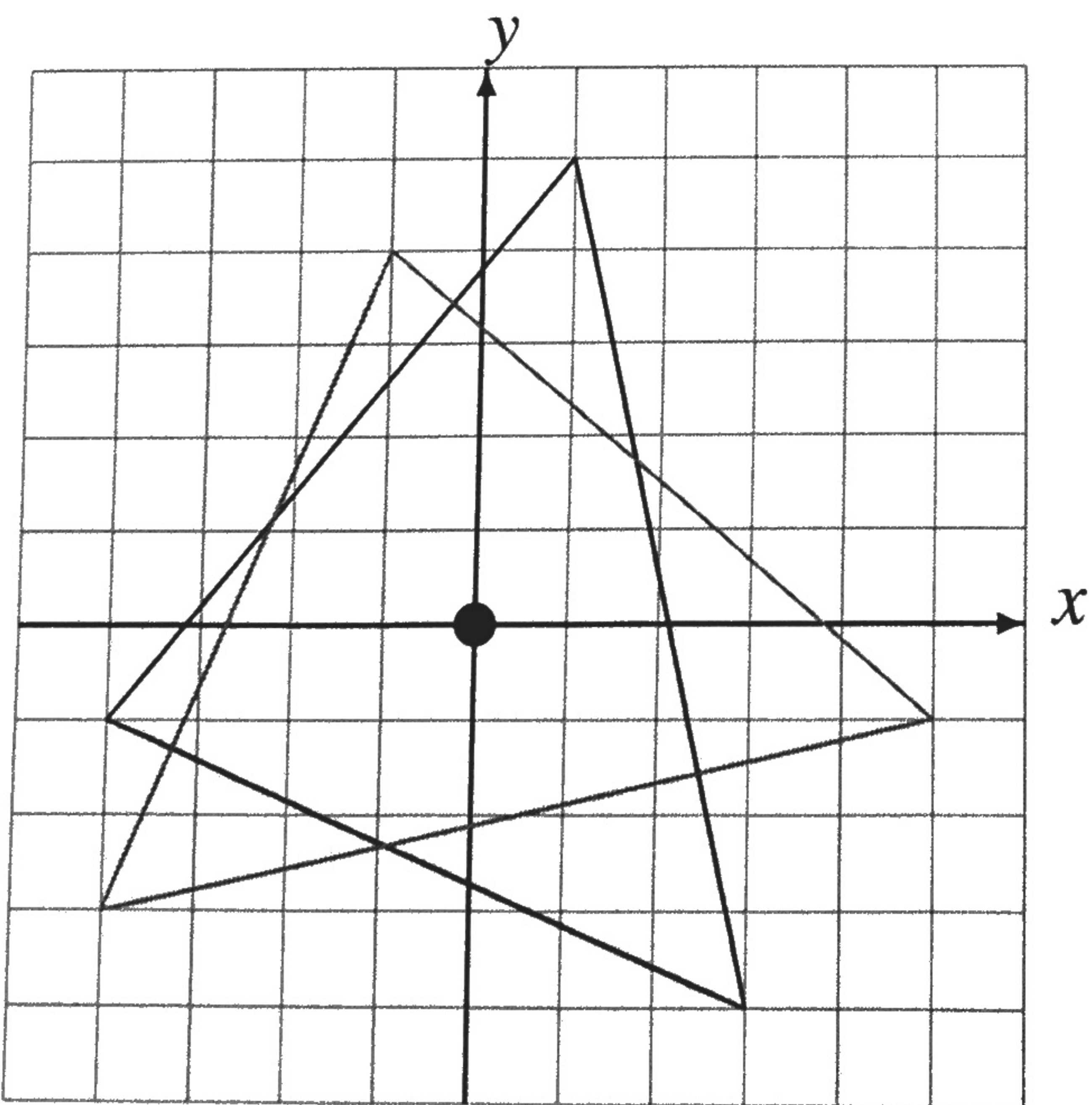
Rotate 90° clockwise about $(0, 0)$.



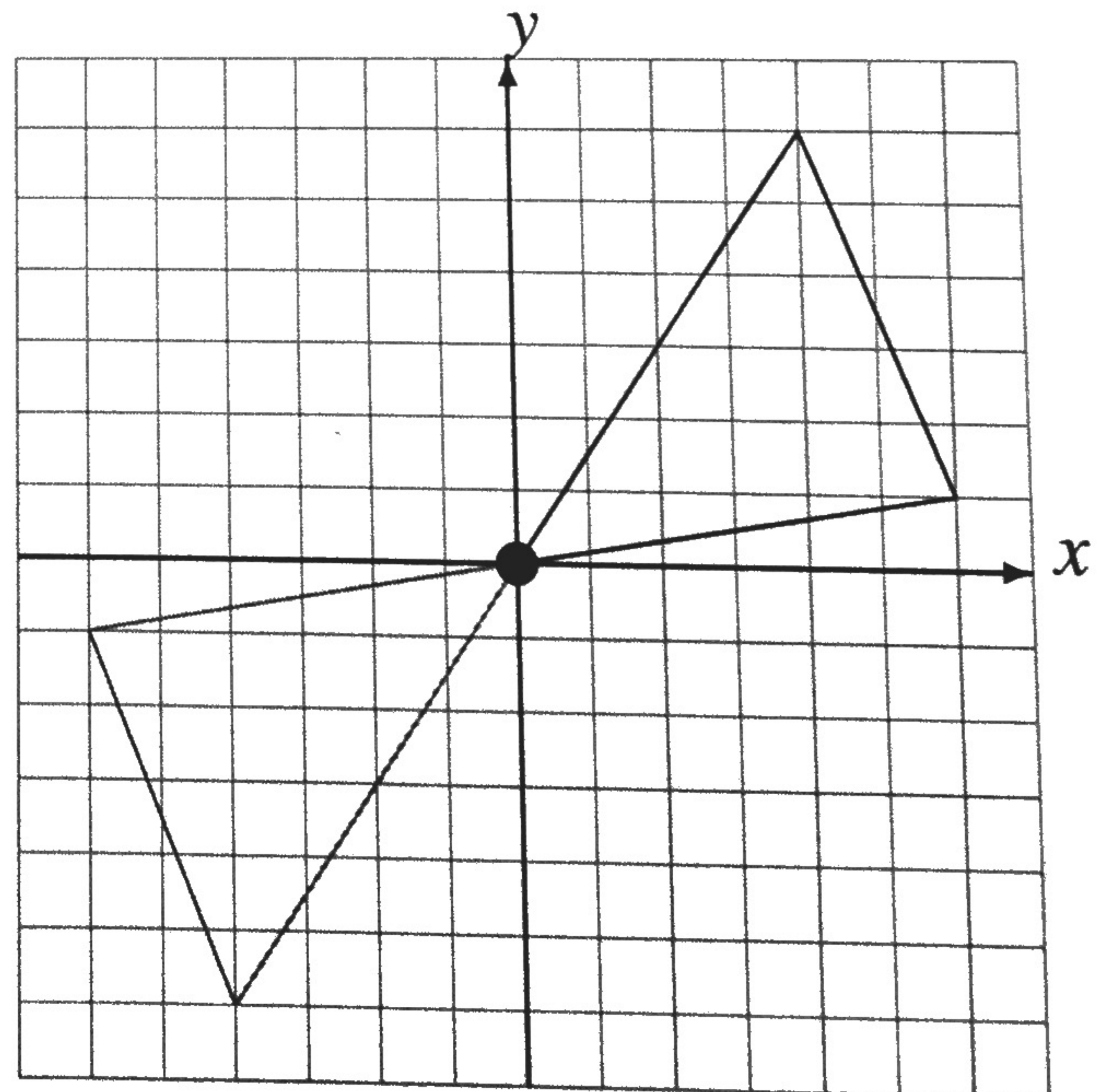
Rotate 90° counterclockwise about $(0, 0)$.



Rotate 90° clockwise about $(0, 0)$.



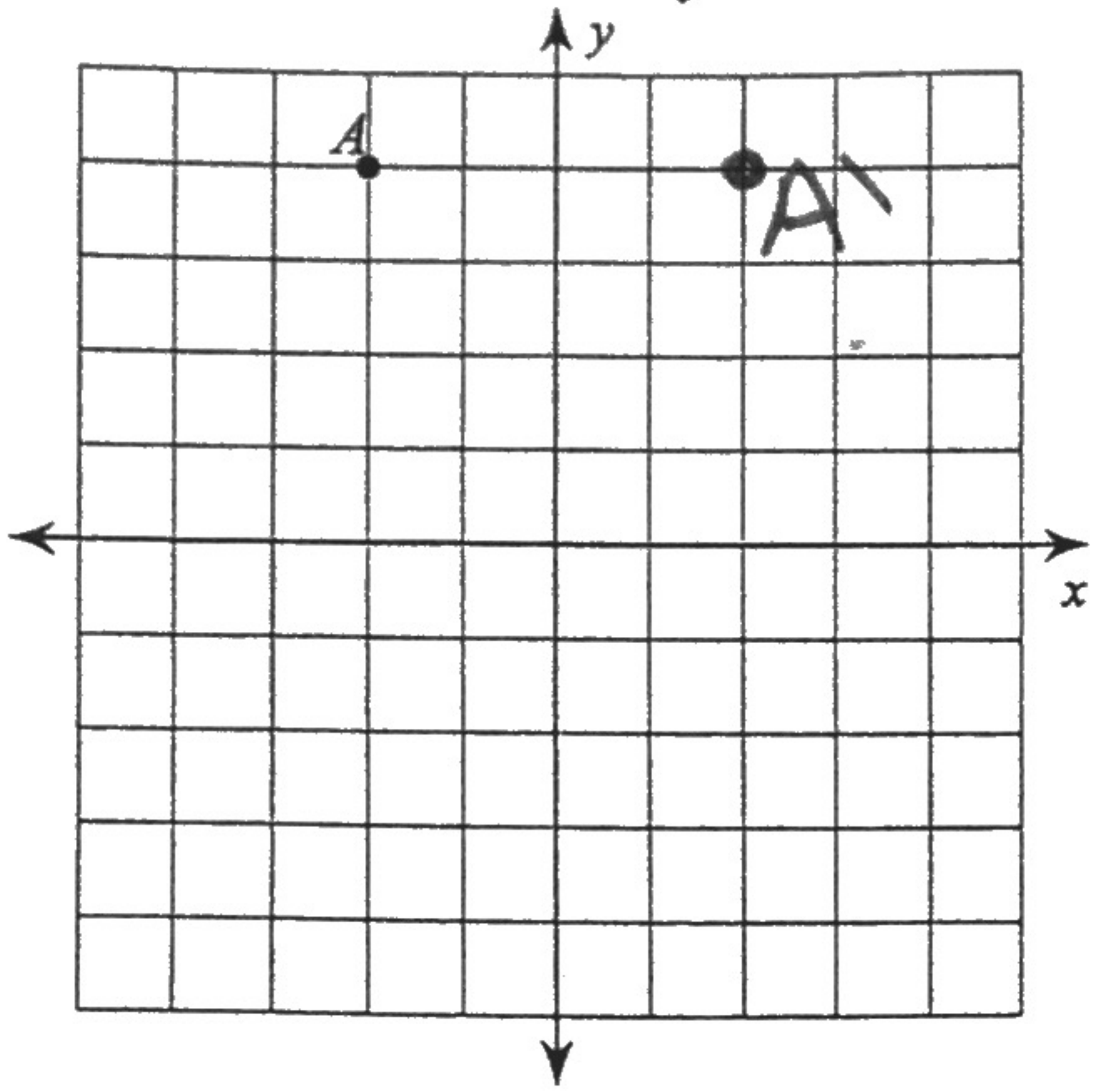
Rotate 180° about $(0, 0)$.



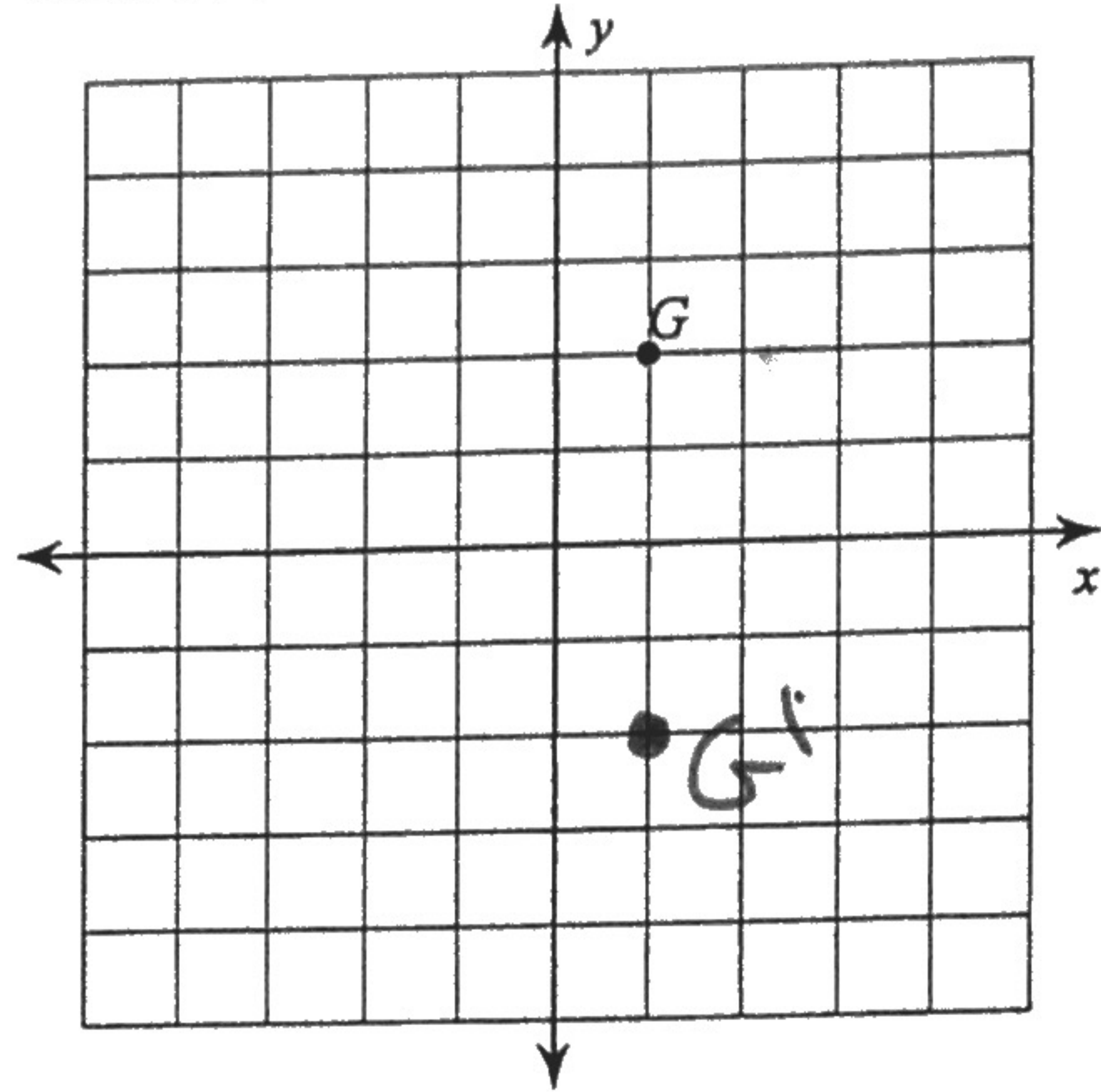
Reflections Worksheet 1

Find the coordinates of the vertices of each figure after the given transformation.

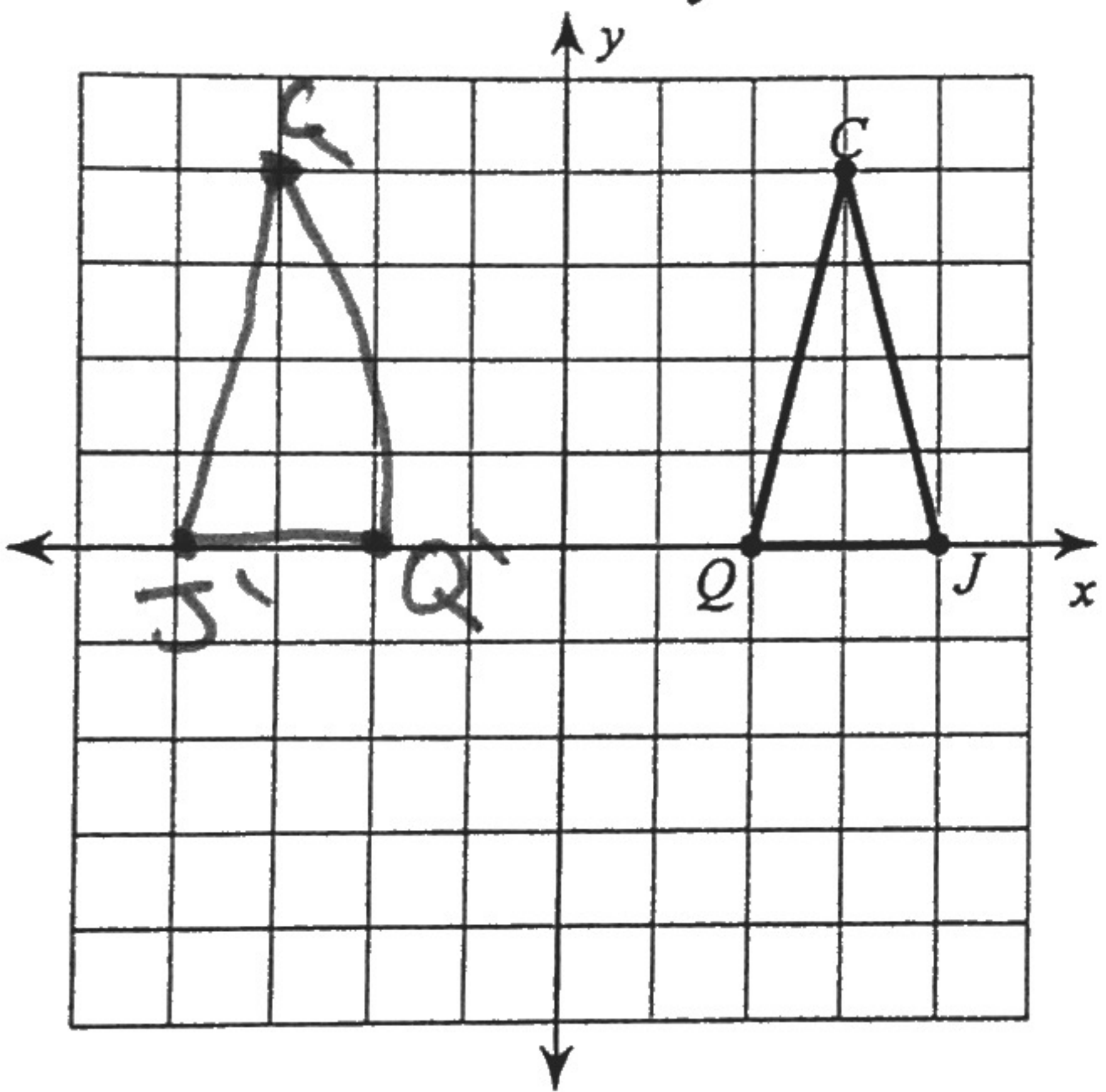
1) reflection across the y-axis



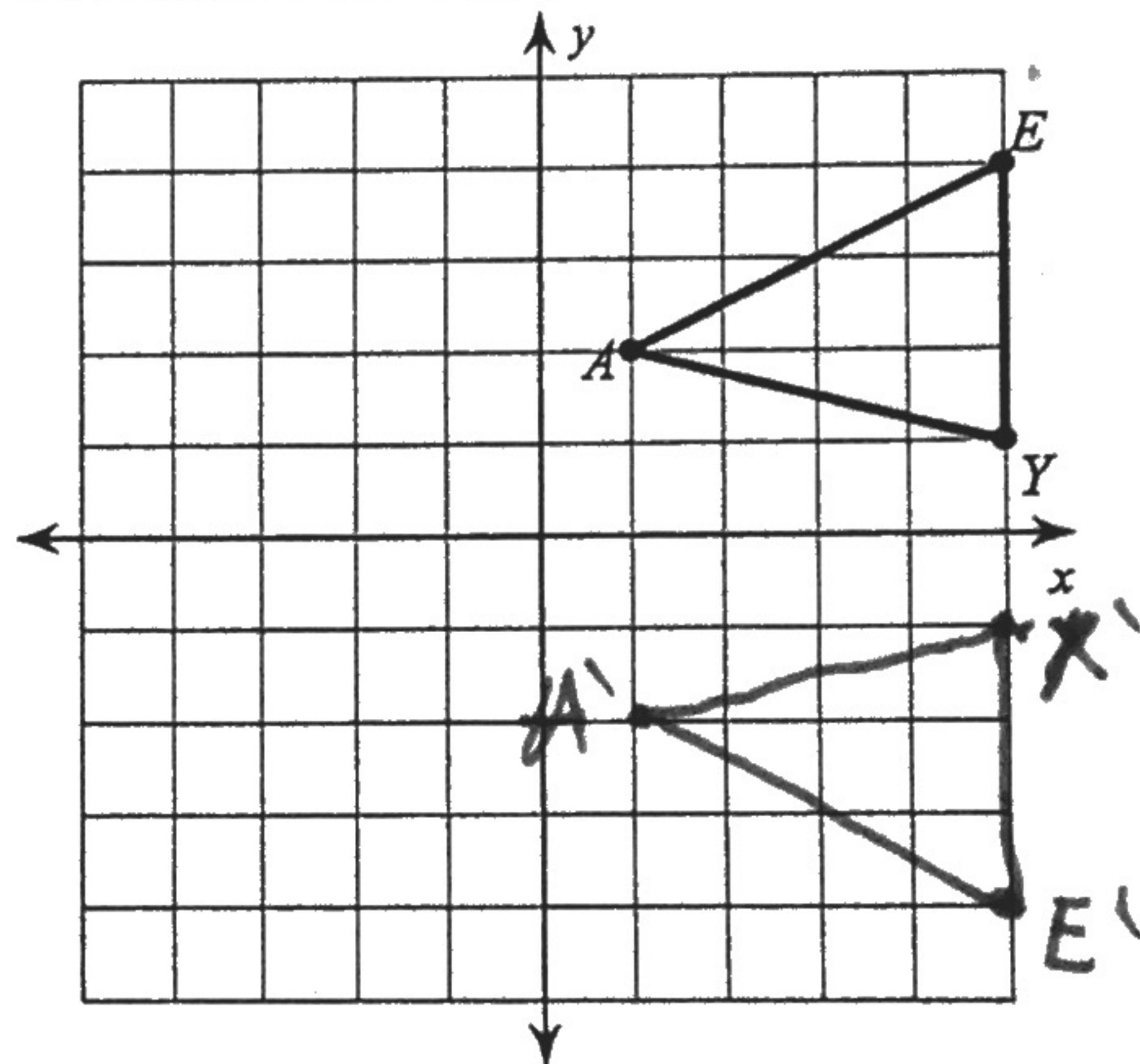
2) reflection across the x-axis



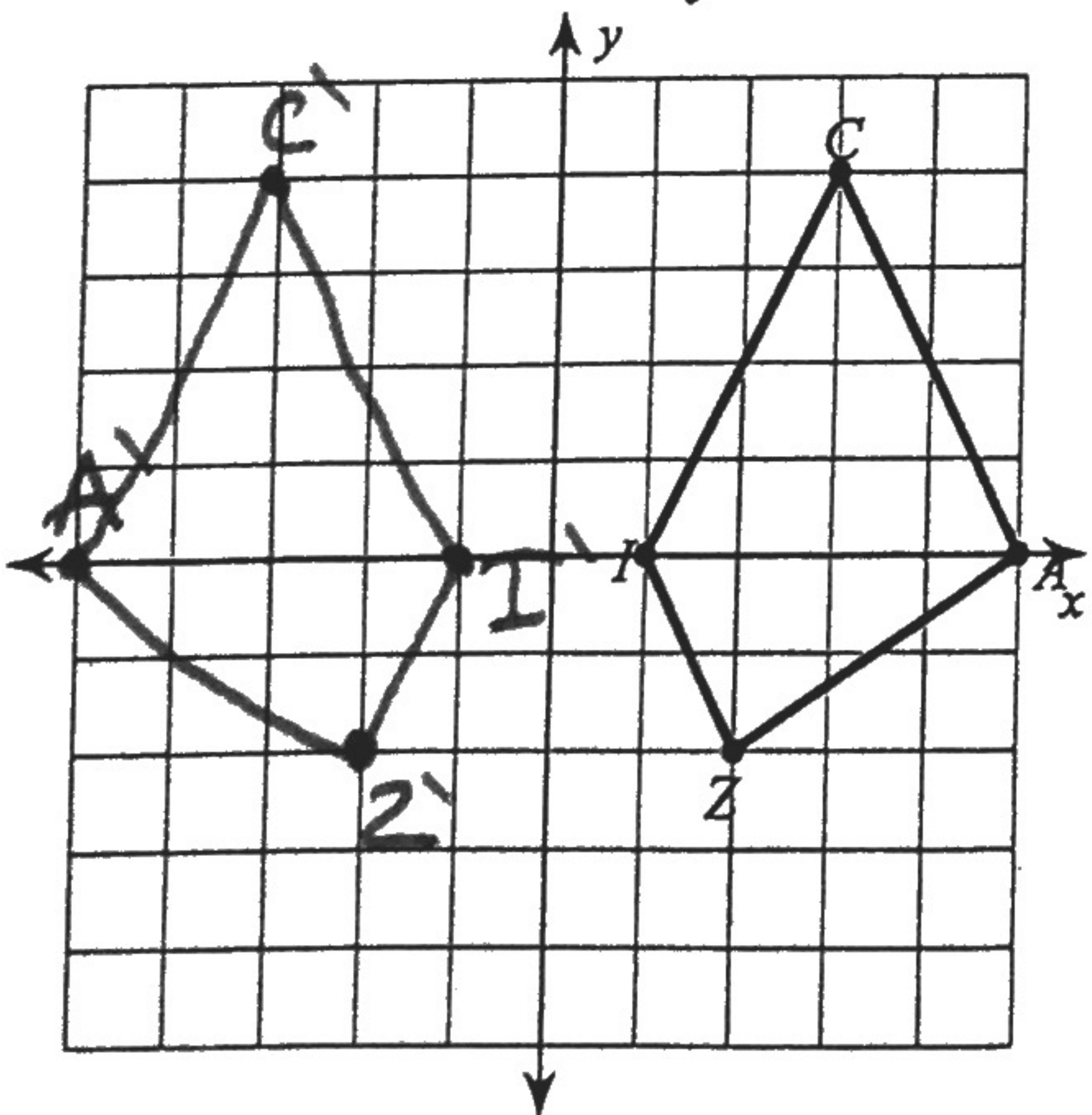
3) reflection across the y-axis



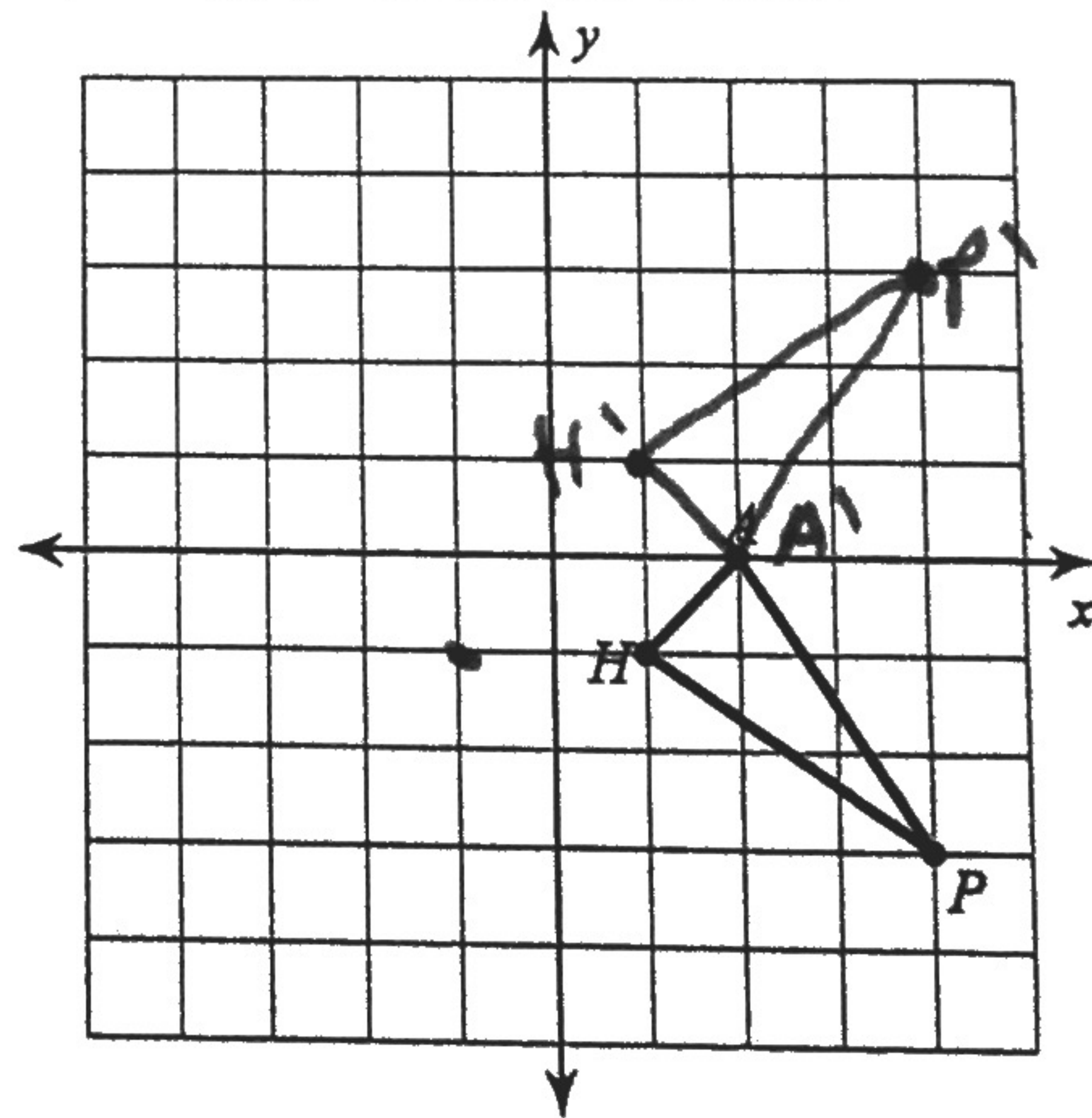
4) reflection across the x-axis



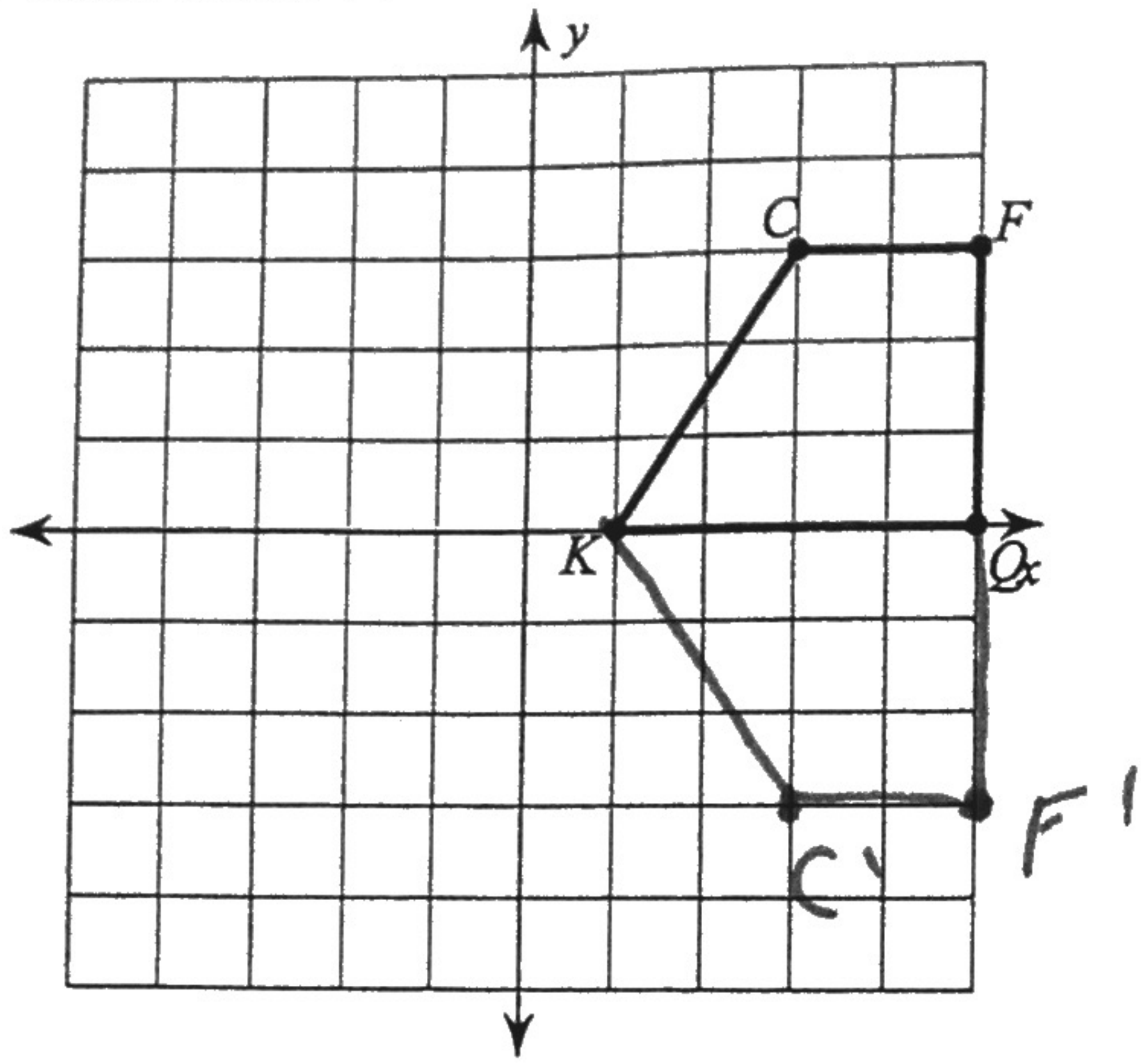
5) reflection across the y-axis



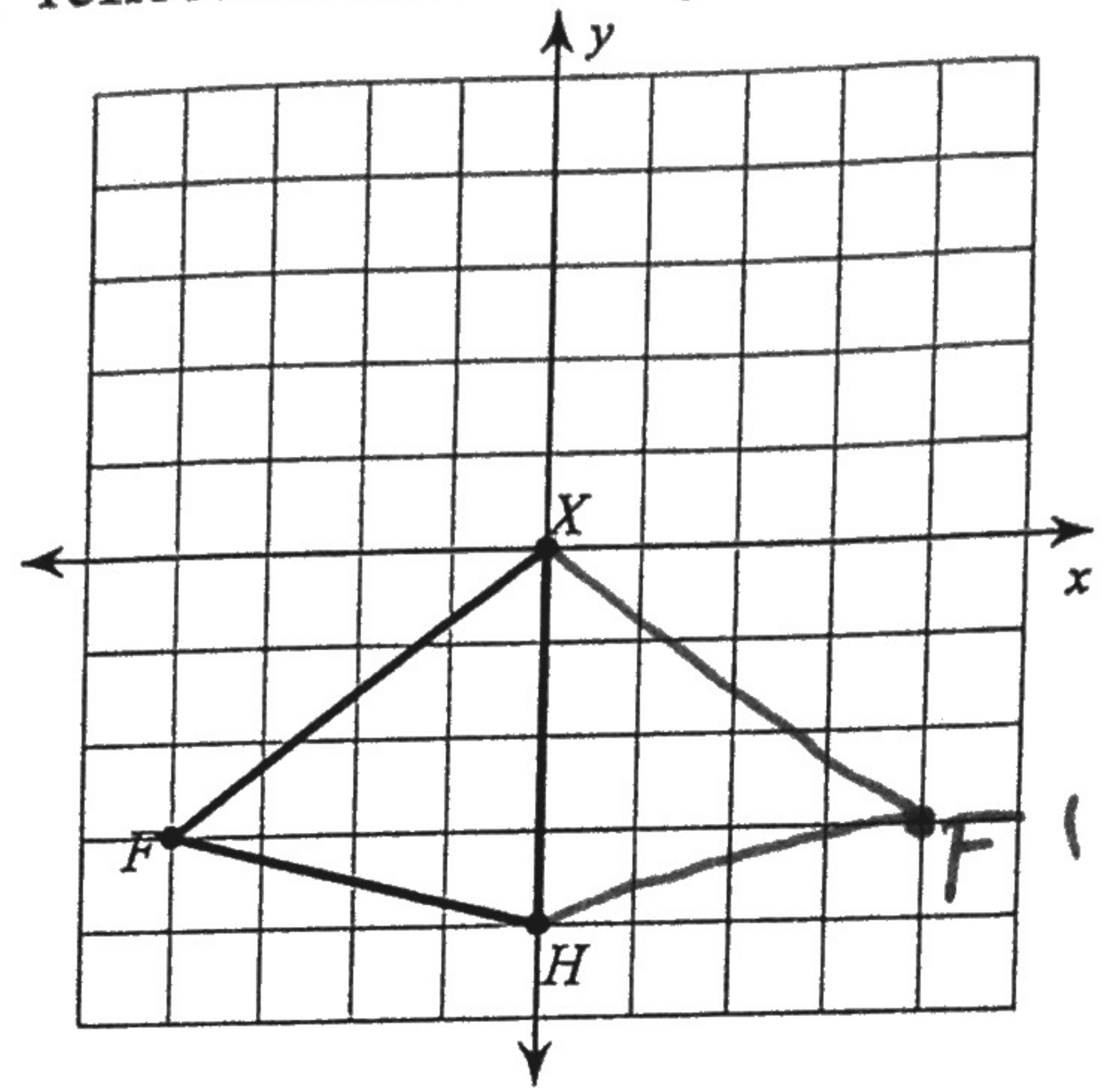
6) reflection across the x-axis



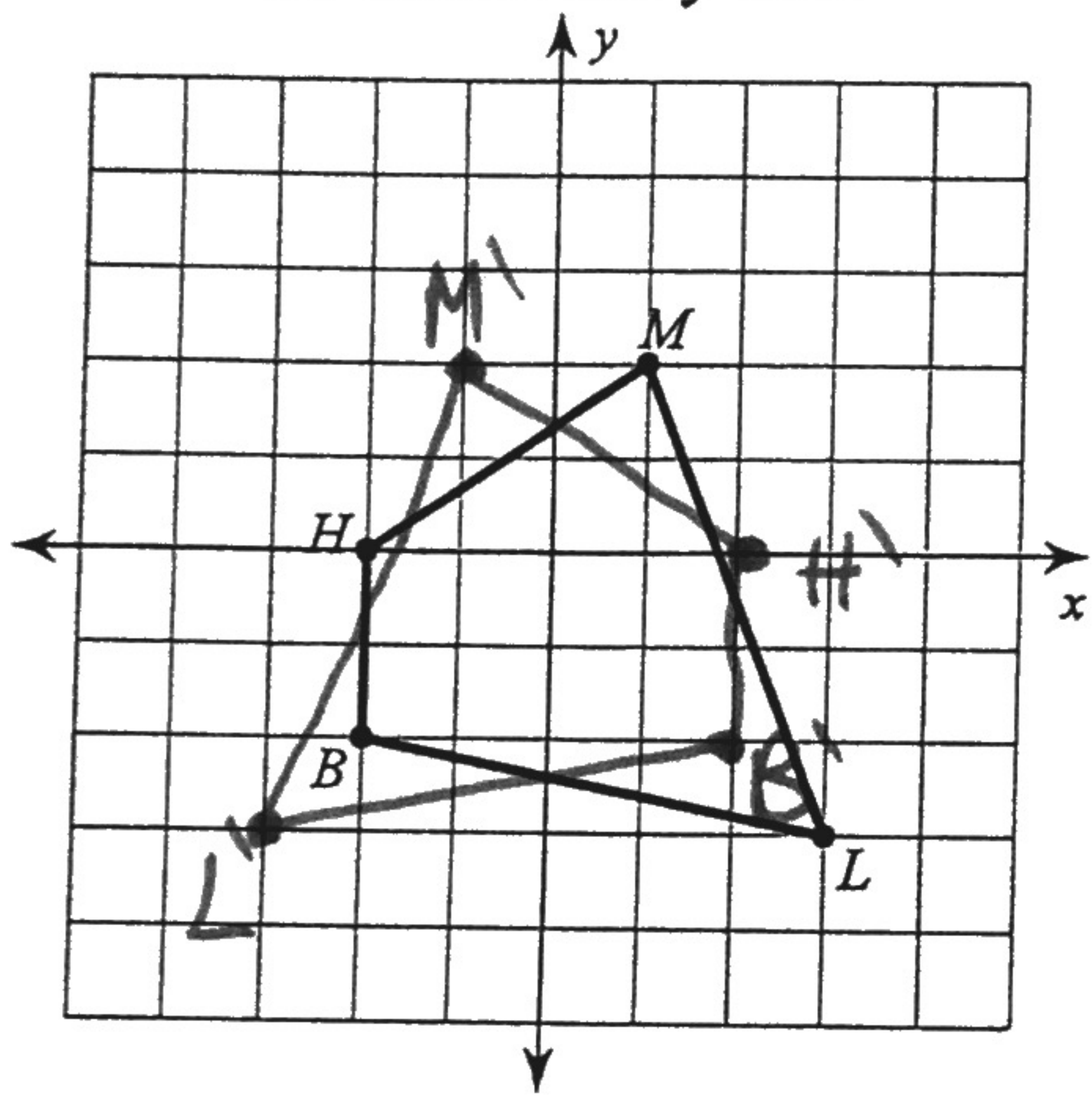
7) reflection across the x-axis



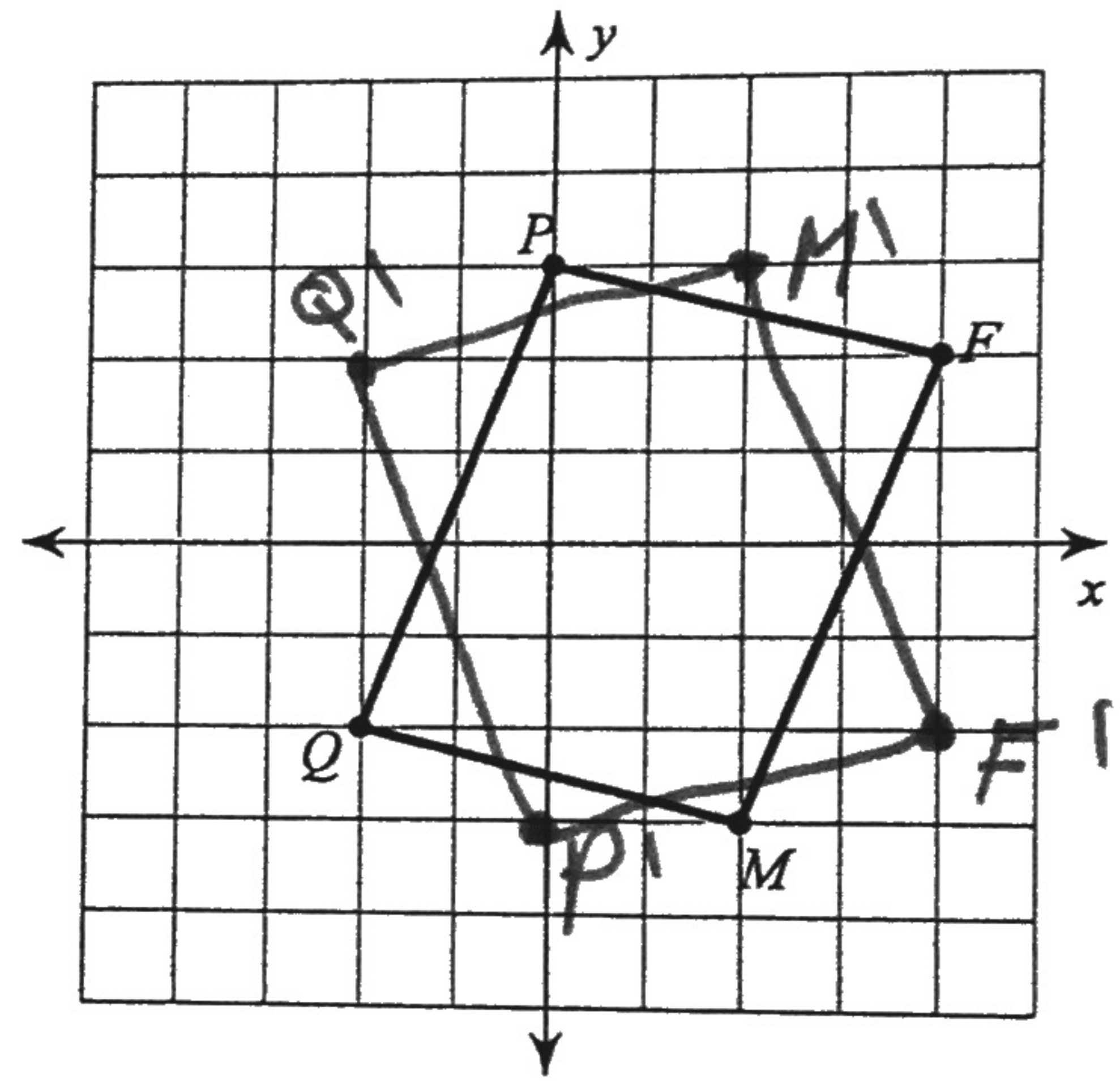
8) reflection across the y-axis



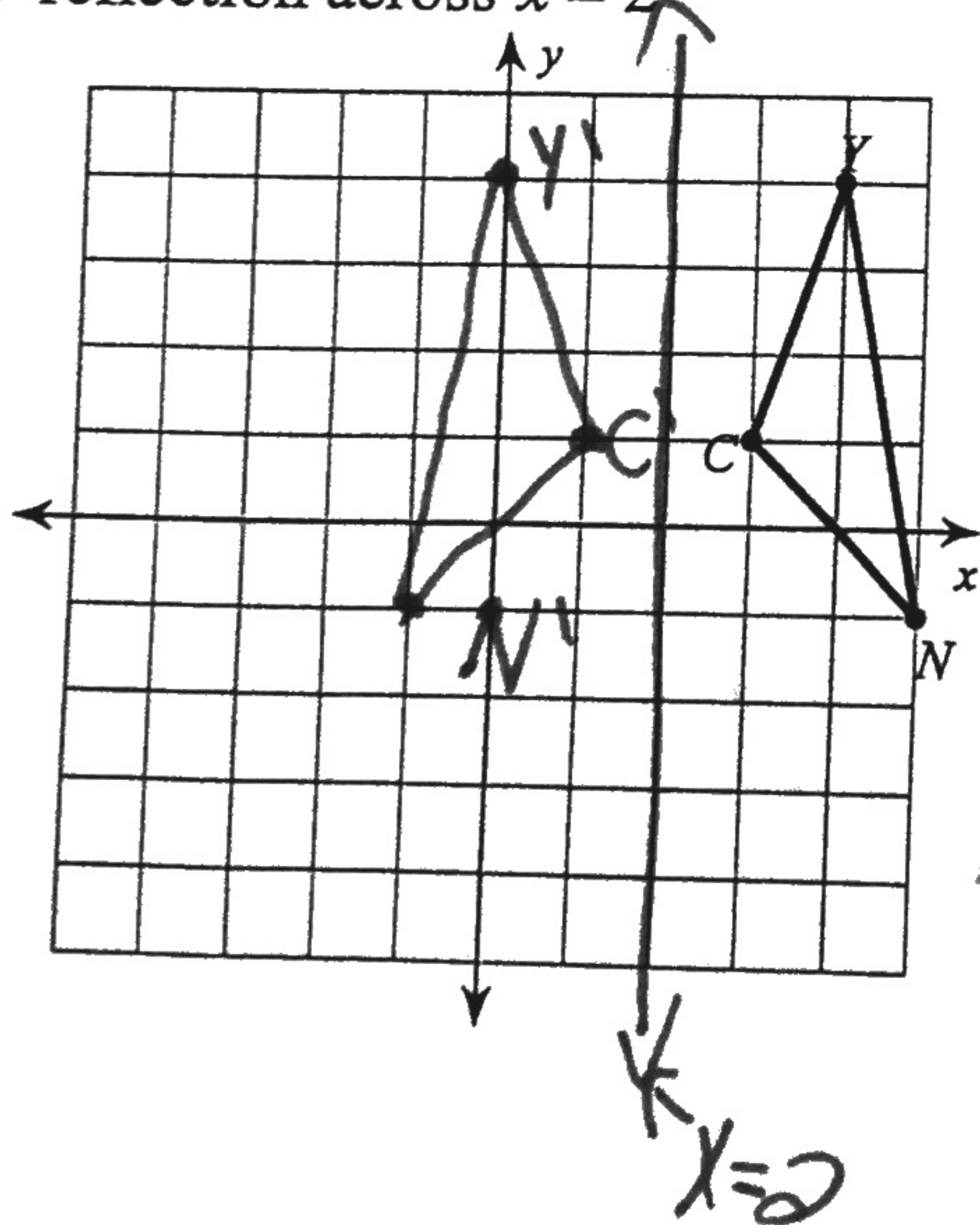
9) reflection across the y-axis



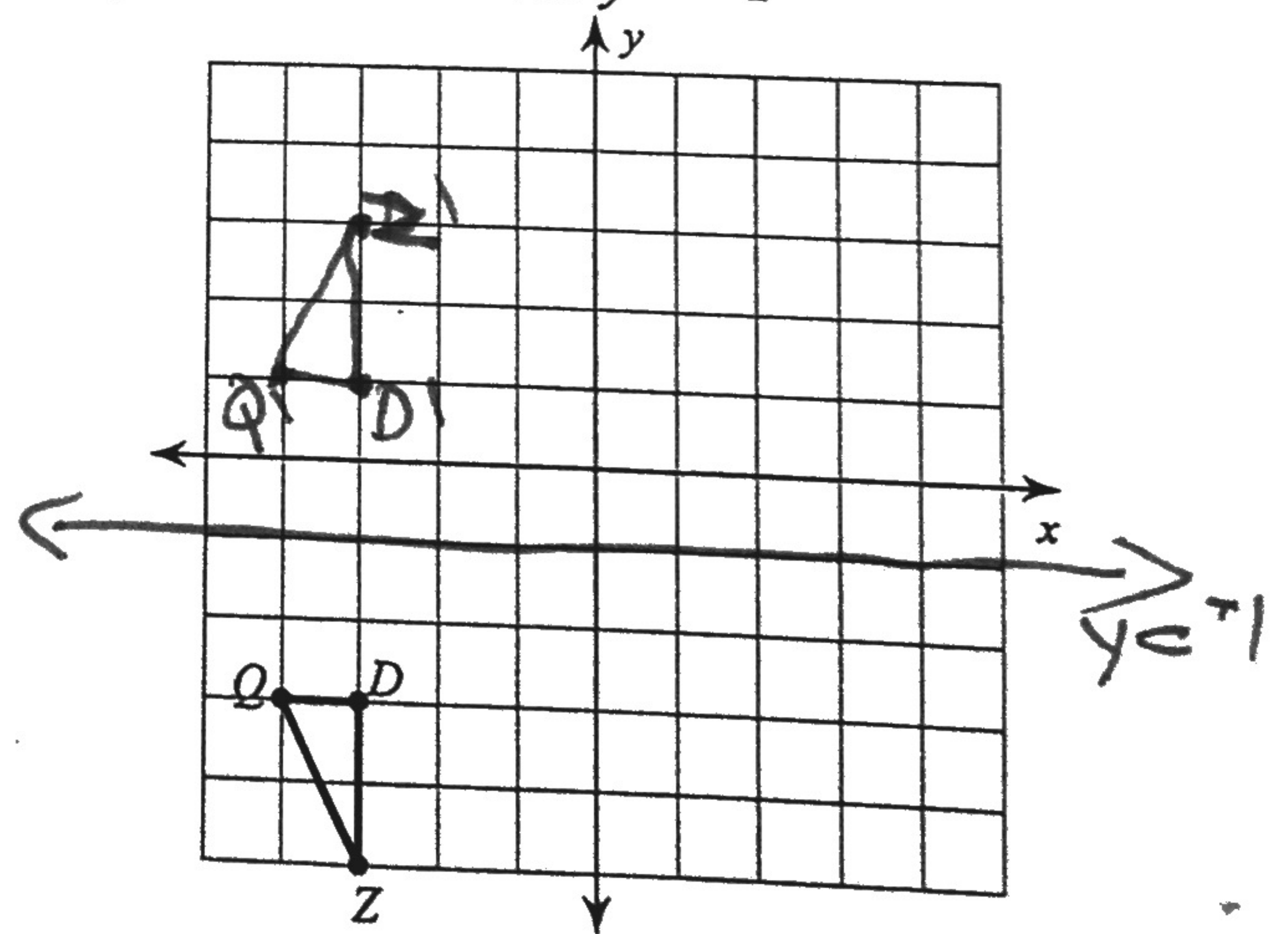
10) reflection across the x-axis



11) reflection across $x = 2$



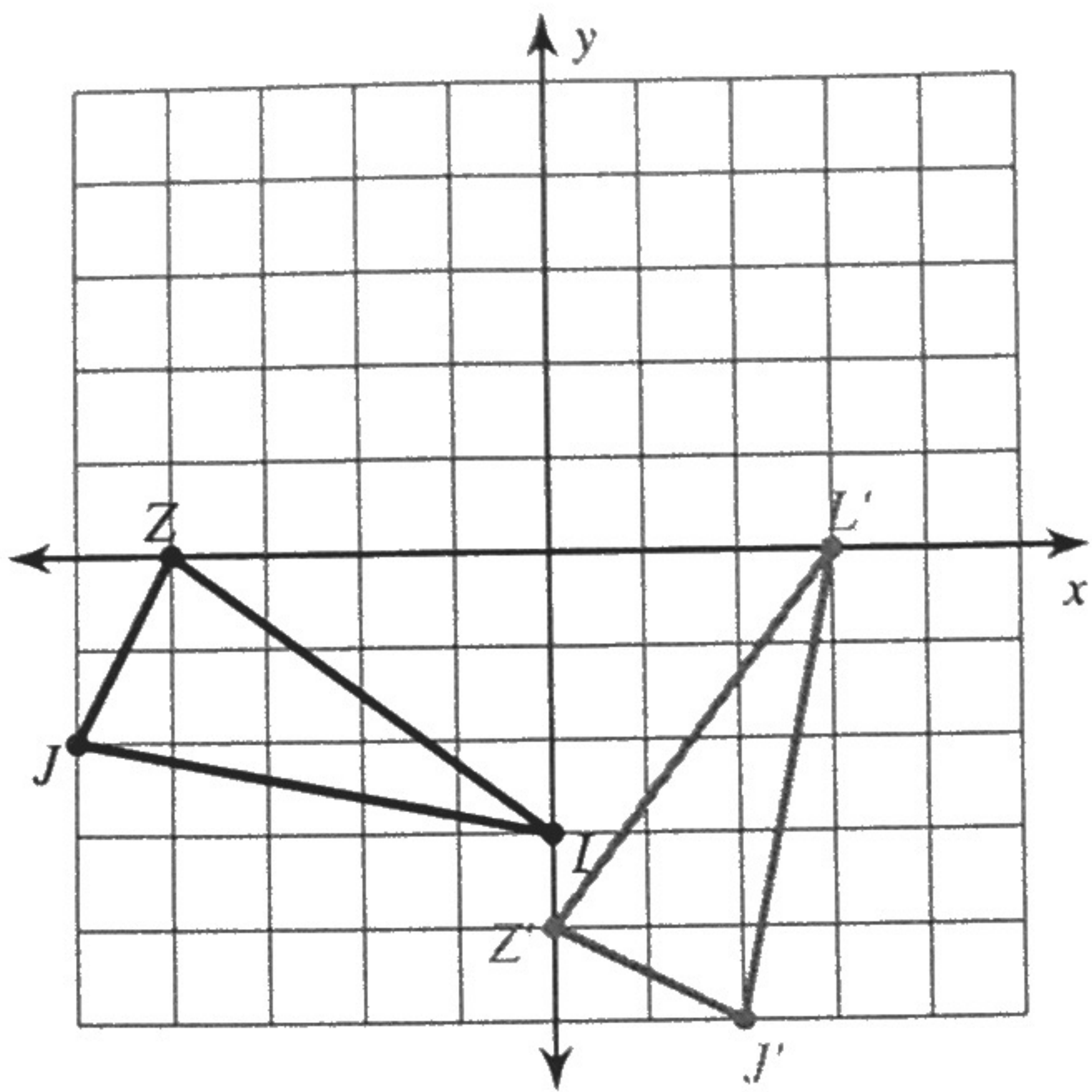
12) reflection across $y = -1$



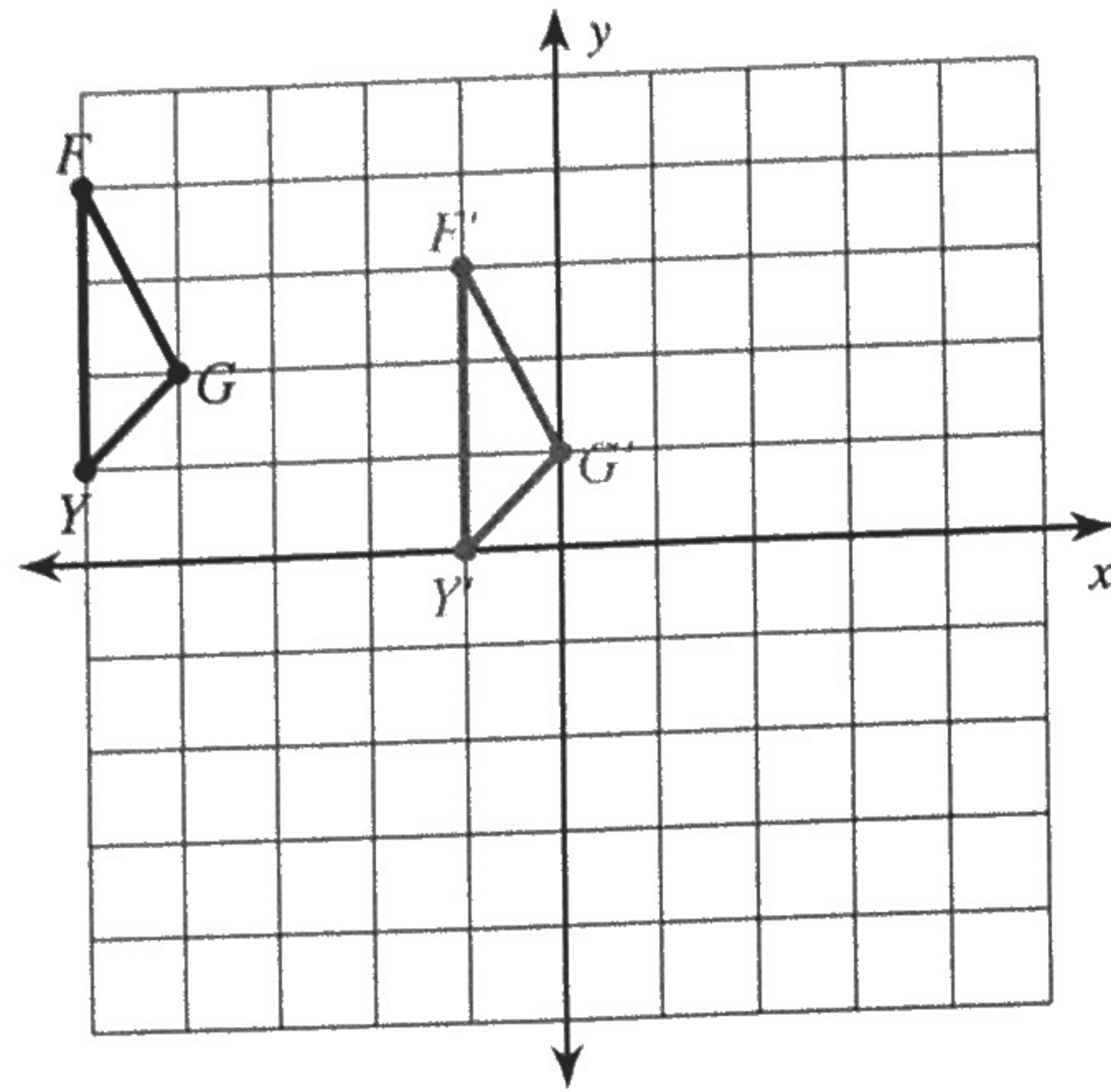
All Transformations

Graph the image of the figure using the transformation given.

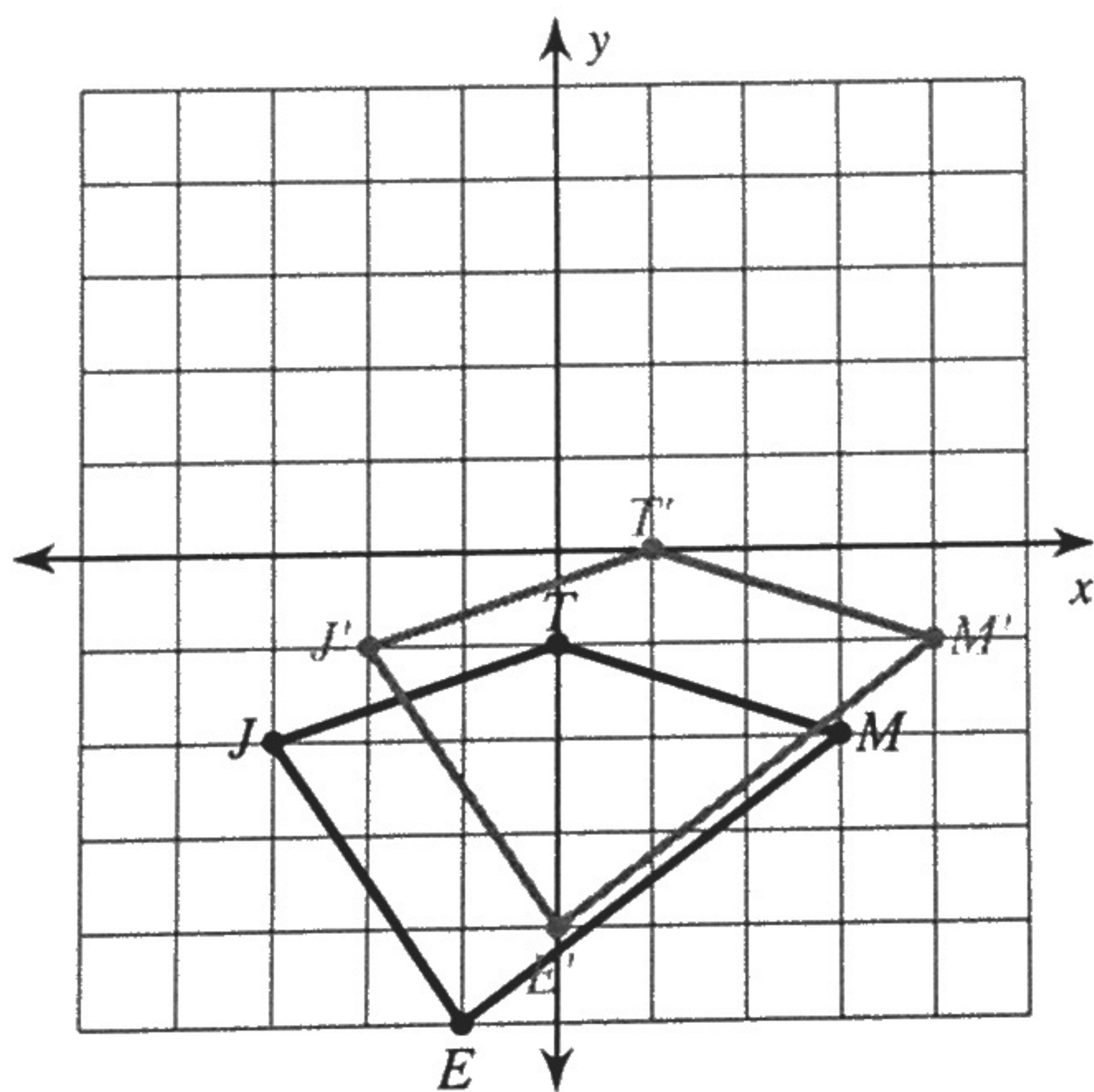
- 1) rotation 90° counterclockwise about the origin



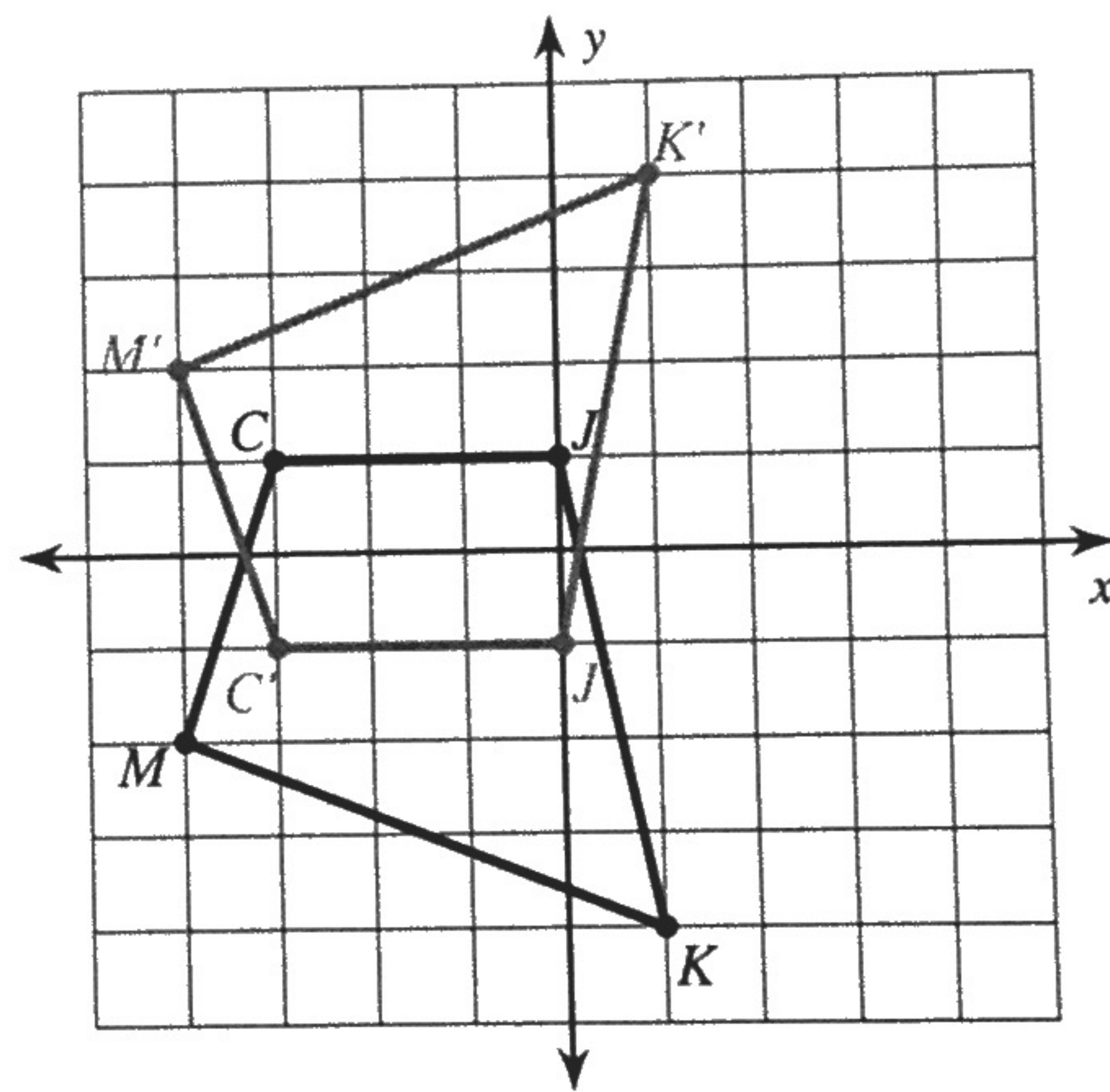
- 2) translation: 4 units right and 1 unit down



- 3) translation: 1 unit right and 1 unit up

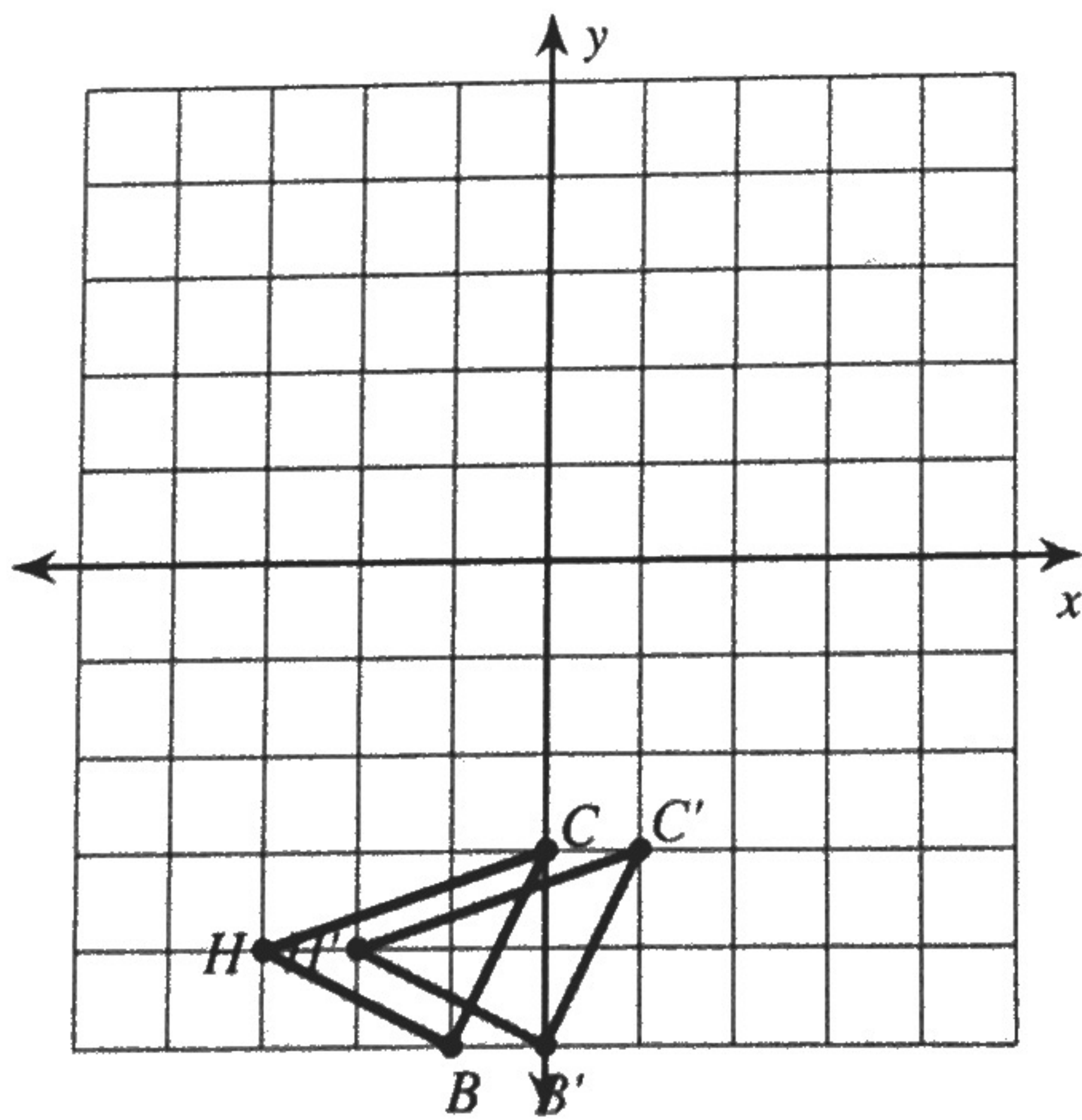


- 4) reflection across the x-axis



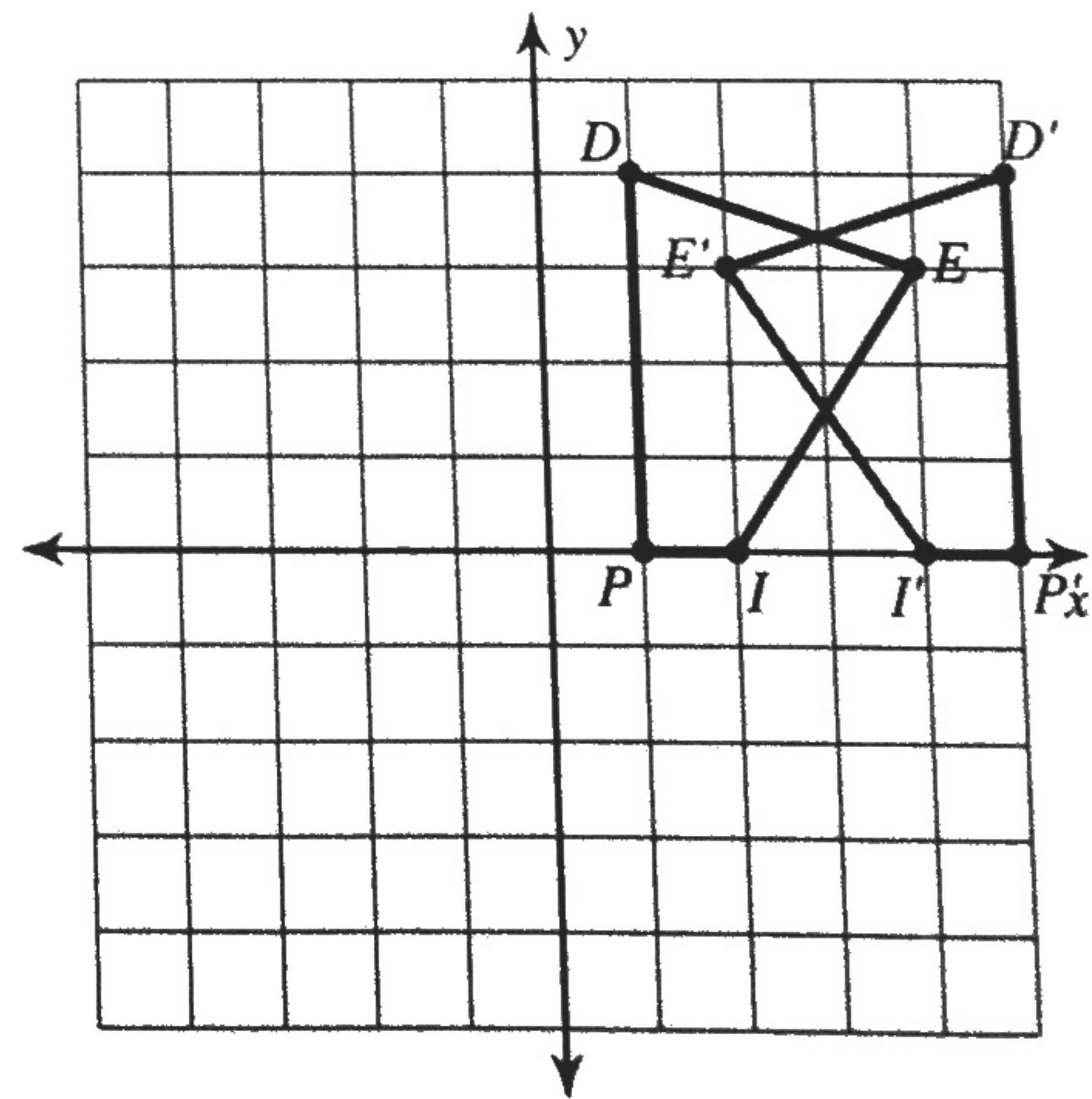
Write a rule to describe each transformation.

- 5)



translation: 1 unit right

- 6)



reflection across $x = 3$