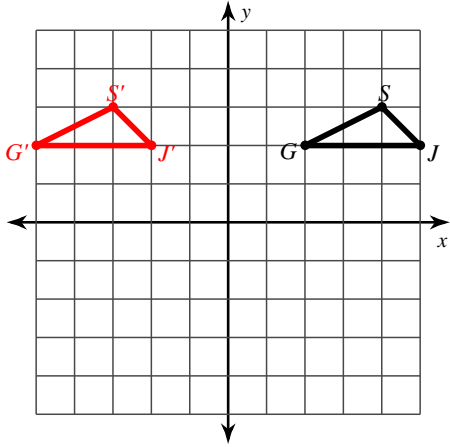


# Corrective Assignment Unit 8

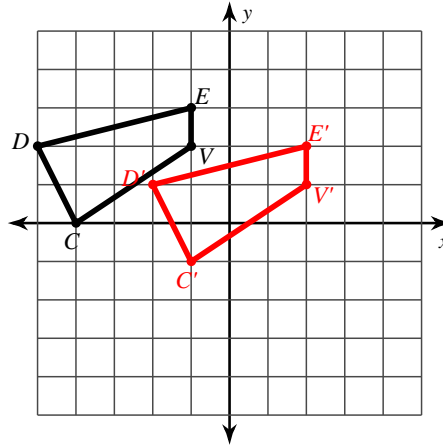
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**Graph the image of the figure using the transformation given.**

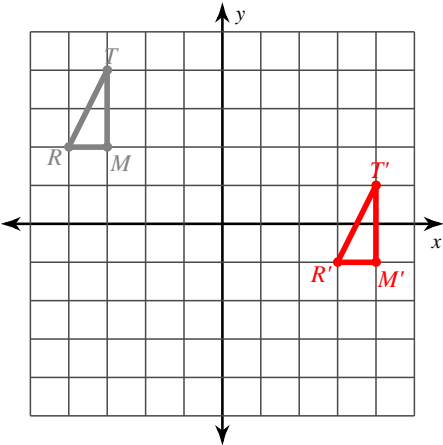
1) translation: 7 units left



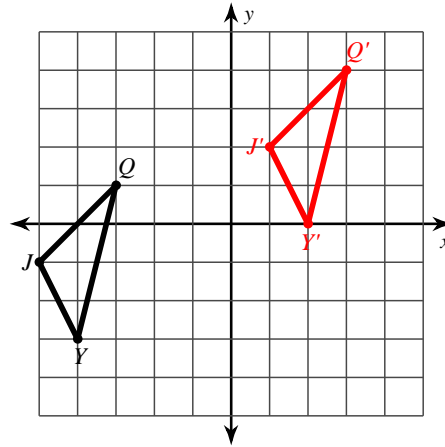
2) translation: 3 units right and 1 unit down



3) translation:  $(x, y) \rightarrow (x + 7, y - 3)$   
 $R(-4, 2), T(-3, 4), M(-3, 2)$



4) translation:  $(x, y) \rightarrow (x + 6, y + 3)$

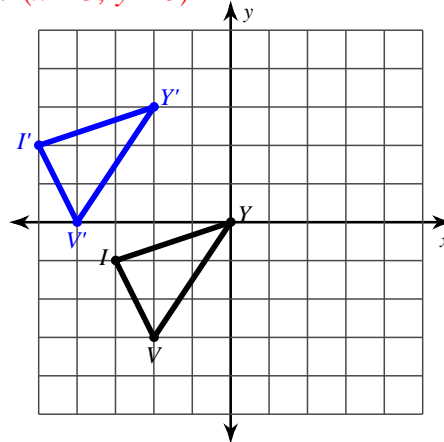
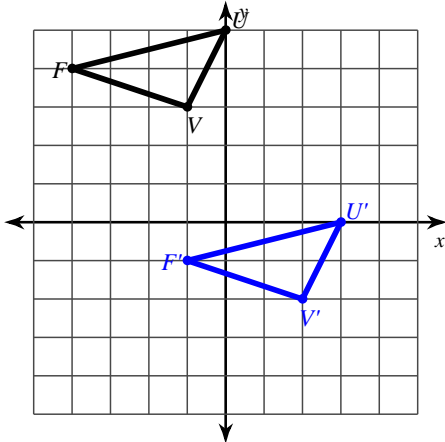


**Write an ALGEBRAIC RULE to describe each transformation.**

5)

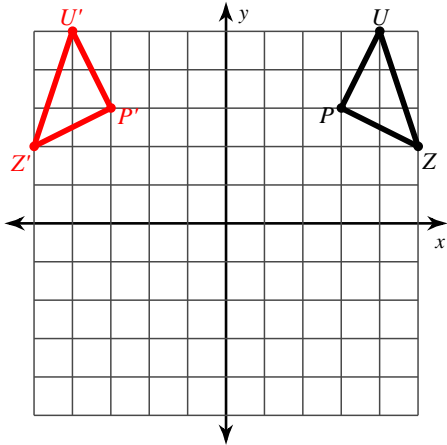
translation:  $(x, y) \rightarrow (x + 3, y - 5)$

translation:  $(x, y) \rightarrow (x - 2,$

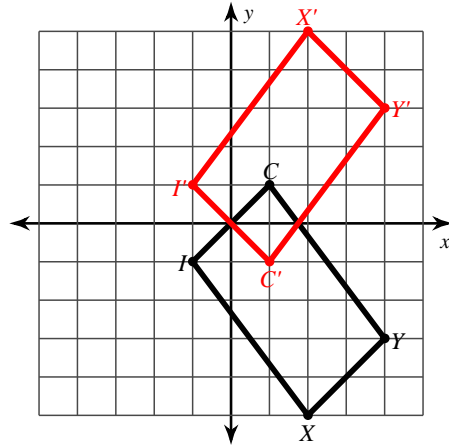


Graph the image of the figure using the transformation given.

7) reflection across the y-axis



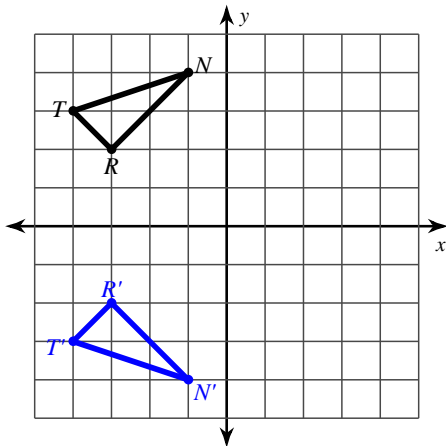
8) reflection across the x-axis



Give the line of reflection (equation or axis) for the transformations below:

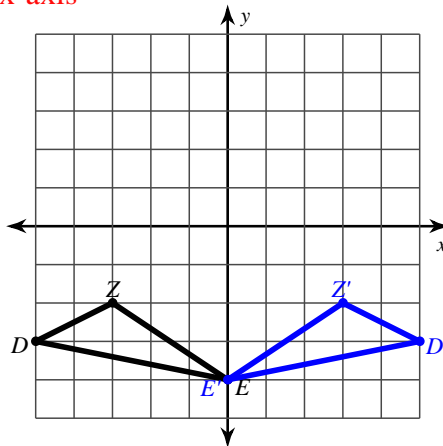
9)

reflection across the x-axis



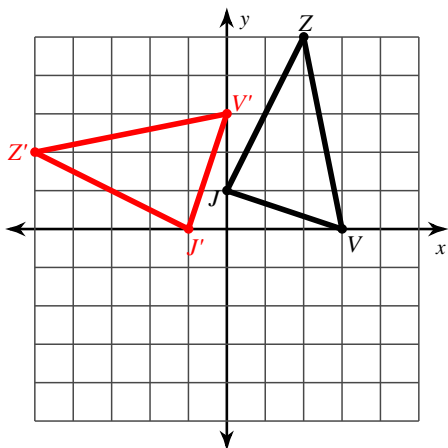
10)

reflection across the y-axis

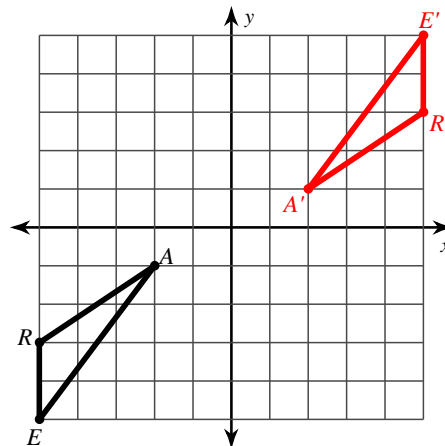


Graph the image of the figure using the transformation given.

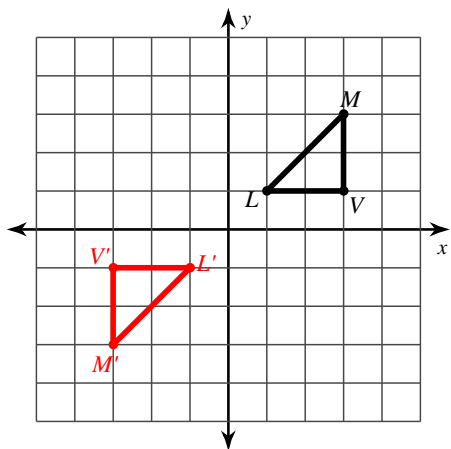
11) rotation  $90^\circ$  counterclockwise about the origin



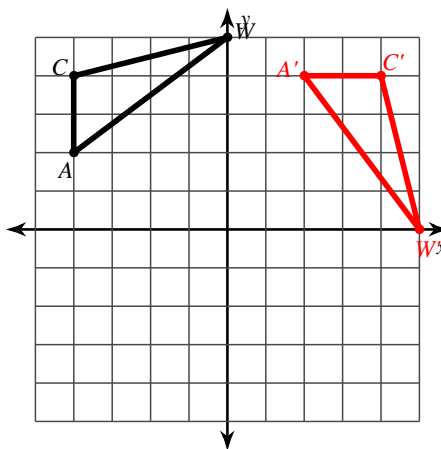
12) rotation  $180^\circ$  about the origin



13) rotation  $180^\circ$  about the origin



14) rotation  $90^\circ$  clockwise about the origin



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

15) rotation  $180^\circ$  about the origin

$U(-2, 1), Z(-3, 5), B(1, 5)$

$U'(2, -1), Z'(3, -5), B'(-1, -5)$

16) rotation  $90^\circ$  clockwise about the origin

$G(1, -3), C(0, -1), L(3, 0)$

$G'(-3, -1), C'(-1, 0), L'(0, -3)$

17) rotation  $90^\circ$  clockwise about the origin

$R(2, 1), V(1, 4), S(5, 5)$

$R'(1, -2), V'(4, -1), S'(5, -5)$

18) rotation  $90^\circ$  counterclockwise about the origin

$V(-5, -1), M(-4, 3), R(-1, 1)$

$V'(1, -5), M'(-3, -4), R'(-1, -1)$

19. Give three numbers that **DO NOT** have reflectional symmetry.

7, 9, 2

20. Give an example of rotational symmetry in sports.

A football has rotational symmetry (180 degrees)

## Application and Extension

21. a. Graph  $K'I'T'$ , the image of  $K(1, -4)$ ,  $I(2, 0)$ ,  $T(1, -1)$  after a translation using the rule  $(x,y) \rightarrow (x + 3, y + 5)$ .

$K'(5, 1)$ ,  $I'(5, 5)$ ,  $T'(4, 4)$

b. Graph  $K''I''T''$ , the image of  $K'I'T'$ , after a CLOCKWISE rotation of  $180^\circ$ .

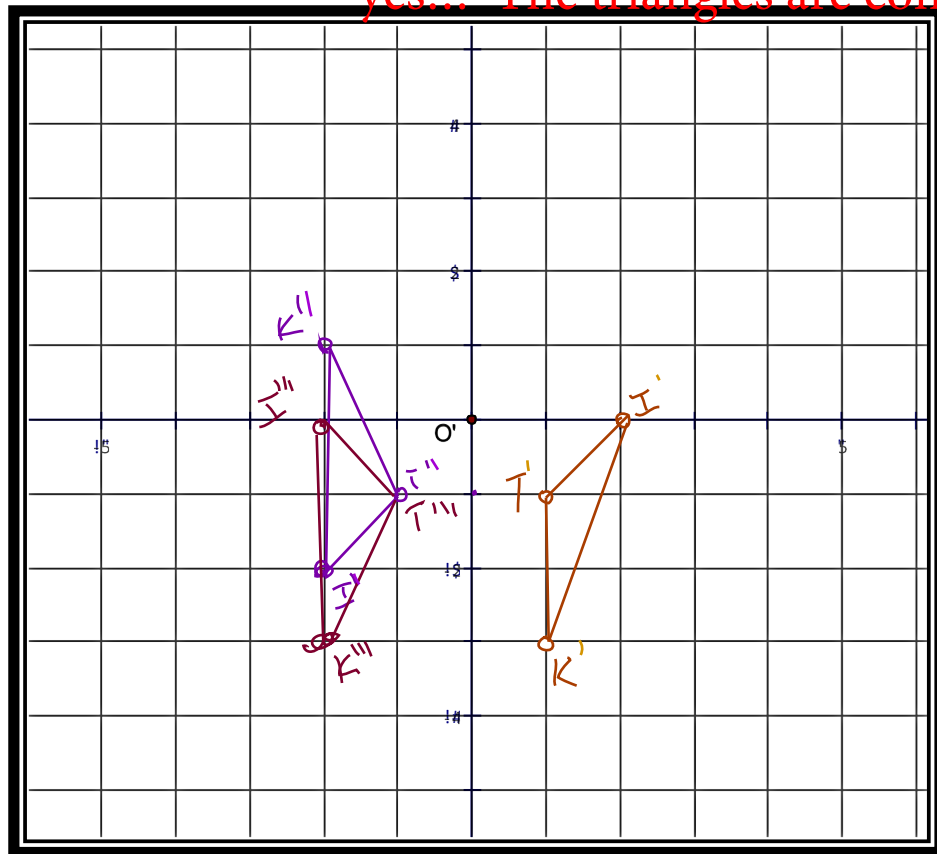
$K''(-5, -1)$ ,  $I''(-5, -5)$ ,  $T''(-4, -4)$

c. Graph  $K'''I'''T'''$ , the image of  $K''I''T''$ , after a reflection in the x-axis.

$K'''(-5, 1)$ ,  $I'''(-5, 5)$ ,  $T'''(-4, 4)$

d. Is the transformation of  $\Delta KIT \rightarrow \Delta K'I'T' \rightarrow \Delta K''I''T'' \rightarrow \Delta K'''I'''T'''$  an isometry?

yes!!! The triangles are congruent!



!  
!

Kell if the following logos have Rotational Symmetry, Reflectional Symmetry, neither, or both.

22.



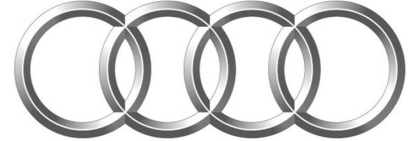
Reflectional

23.



Reflectional

24.



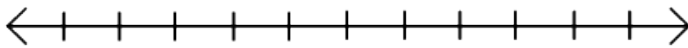
Both!

Solve each equation for x!

1.

$$-3x - 15 > 15$$

$$x < 30$$



Factor!

2.

$$-2x + 9 + 5x = -3x - 15$$

$$x = -4$$

Factor!

3.

$$x^2 - 4x - 5$$

$$(x - 5)(x + 1)$$

4.

$$2x^2 + 5x + 3$$

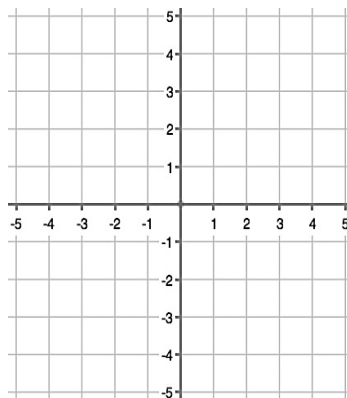
$$(2x + 3)(x + 1)$$

5. Graph the equation:

$$6y + 4x = 12$$

$$m = -2/3$$

$$b = 2$$



6. Graph the equation:

$$3y = 12 + 4x$$

$$m = 4/3$$

$$b = 4$$

