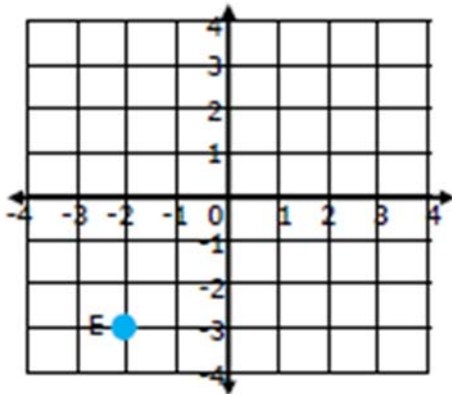


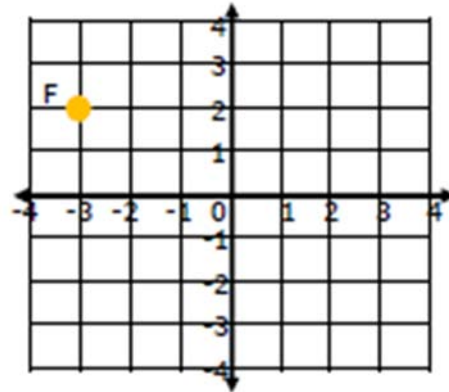
Lesson 6: Congruence

TranslationsVideo Help: <https://learnzillion.com/lessons/3201>**Directions: Complete the following problems about translations.**

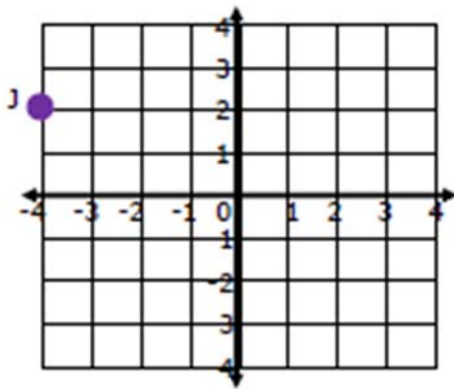
- 1) Graph and state the coordinates of the image of $E(-2, -3)$ after a translation 6 units up.



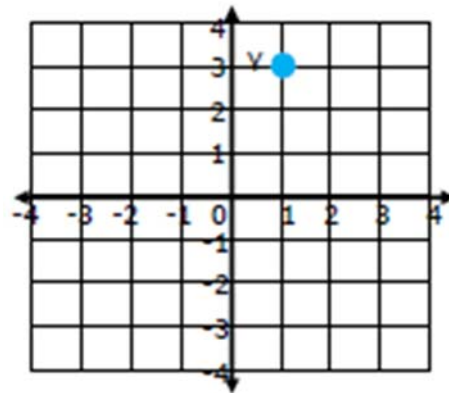
- 2) Graph and state the coordinates of the image of $F(-3, 2)$ after a translation 4 units down.



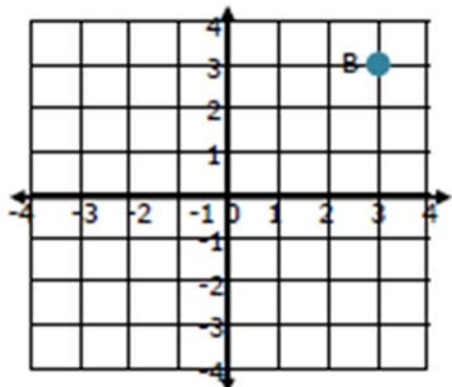
- 3) Graph and state the coordinates of the image of $J(-4, 2)$ after a translation of 5 units right.



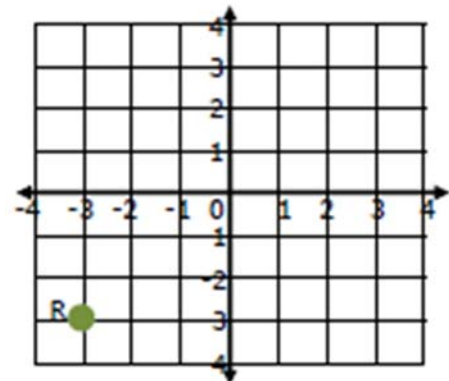
- 4) Graph and state the coordinates of the image of $Y(1, 3)$ after a translation of 3 units down and 4 units left.



- 5) Graph and state the coordinates of the image of $B(3, 3)$ after a translation 4 units left.



- 6) Graph and state the coordinates of the image of $R(-3, -3)$ after a translation 2 units right and 6 units up.

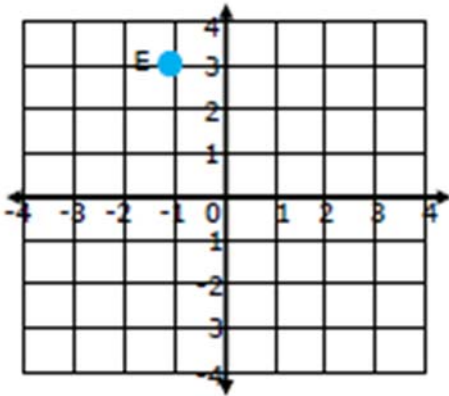


Reflections

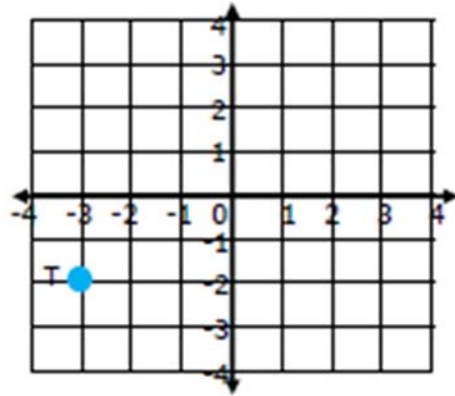
Video Help: <https://learnzillion.com/lessons/3319-graph-a-reflected-image-using-coordinates>

Directions: Complete the following problems about reflections.

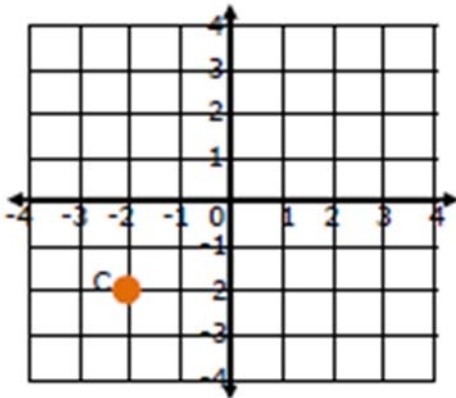
7) Graph and state the coordinates of the image of $E(-1, 3)$ after a reflection in the x -axis.



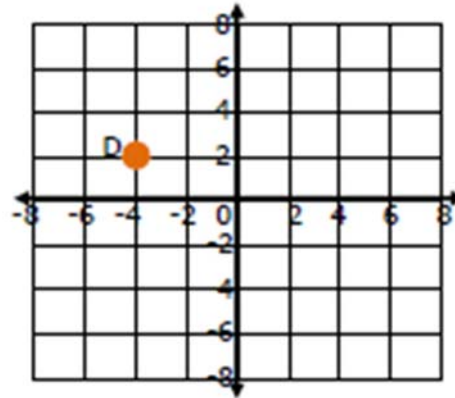
8) Graph and state the coordinates of the image of $T(-3, -2)$ after a reflection in the y -axis..



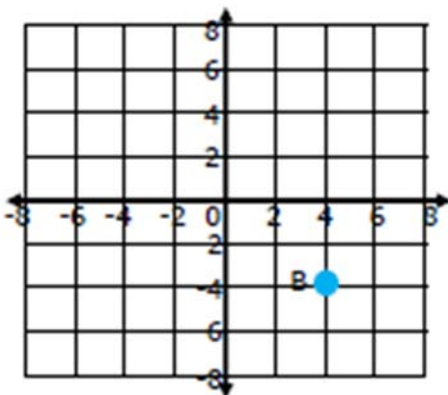
9) Graph and state the coordinates of the image of $C(-2, -2)$ after a reflection in the x -axis.



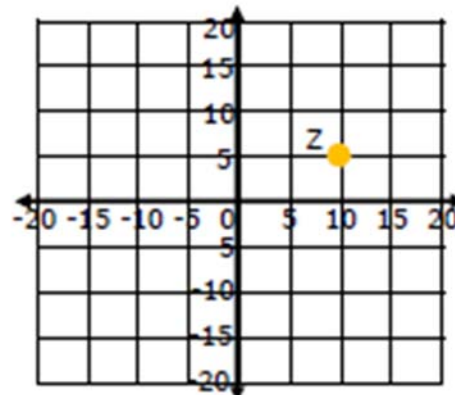
10) Graph and state the coordinates of the image of $D(-4, 2)$ after a reflection in the y -axis.



11) Graph and state the coordinates of the image of $B(4, -4)$ after a reflection in the x -axis.



12) Graph and state the coordinates of the image of $Z(10, 5)$ after reflection in the y -axis.

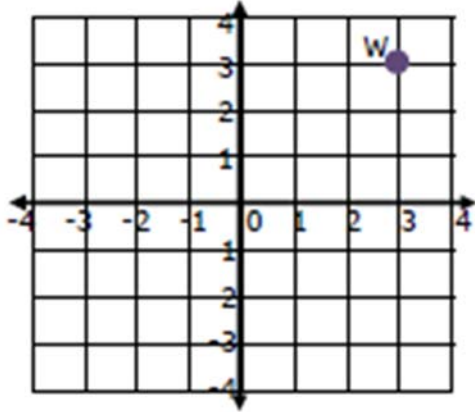


Rotations

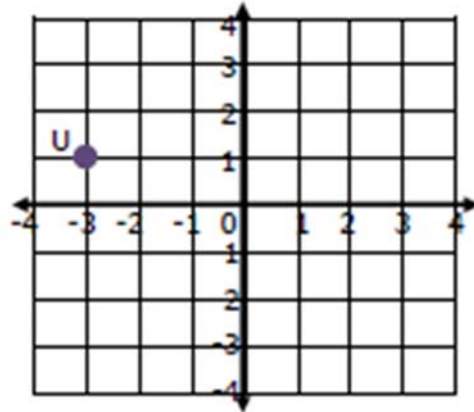
Video Help: <https://learnzillion.com/lessons/3320-graph-a-rotated-image-using-coordinates>

Directions: Complete the following problem about rotations.

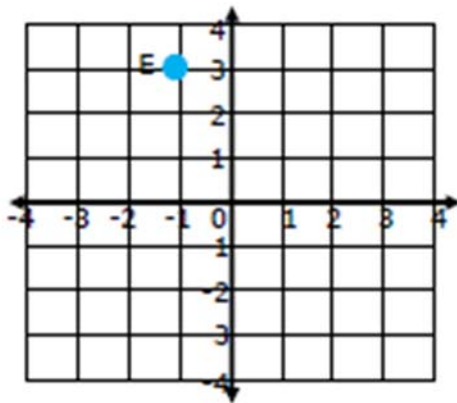
13) Graph and state the coordinates of the image of $W(3, 3)$ after a rotation 180° clockwise around the origin.



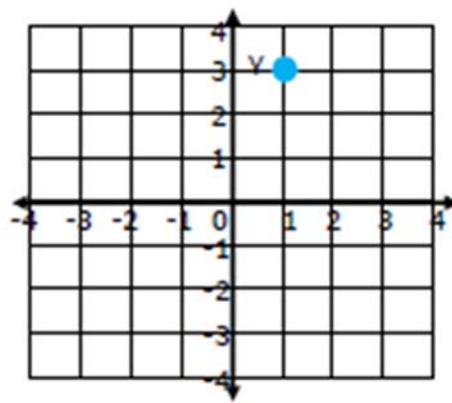
14) Graph and state the coordinates of the image of $U(-3, 1)$ after a rotation 90° counter clockwise around the origin.



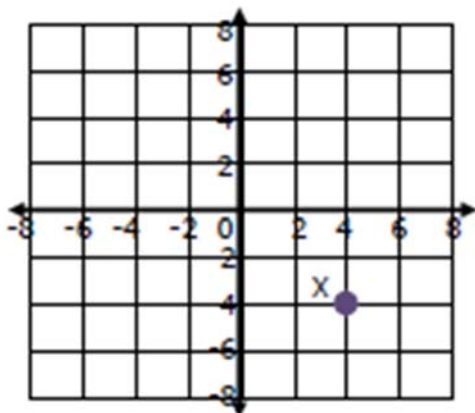
15) Graph and state the coordinates of the image of $E(-1, 3)$ after a rotation 180° clockwise around the origin.



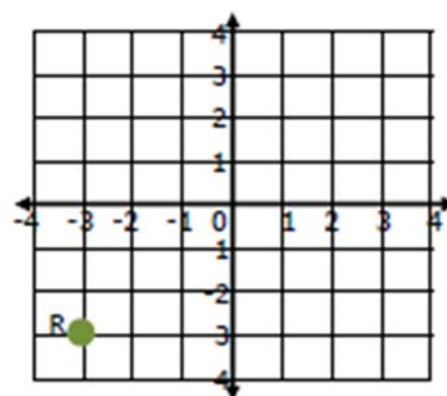
16) Graph and state the coordinates of the image of $Y(1, 3)$ after a rotation 90° counter clockwise around the origin.



17) Graph and state the coordinates of the image of $X(4, -4)$ after a rotation 180° clockwise around the origin.

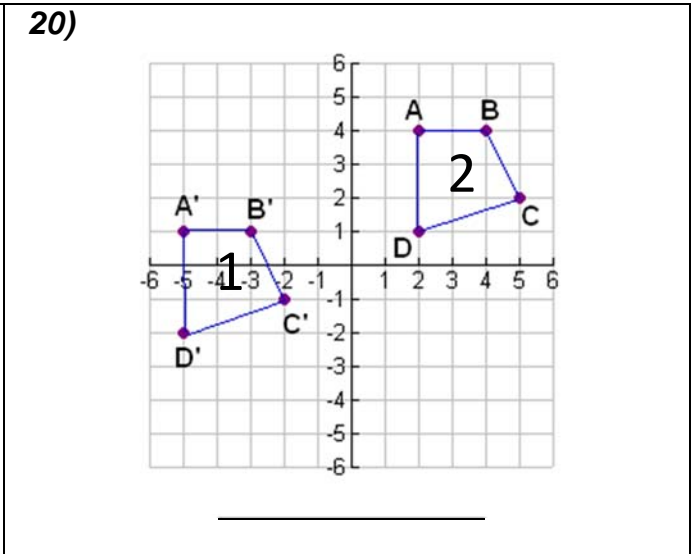
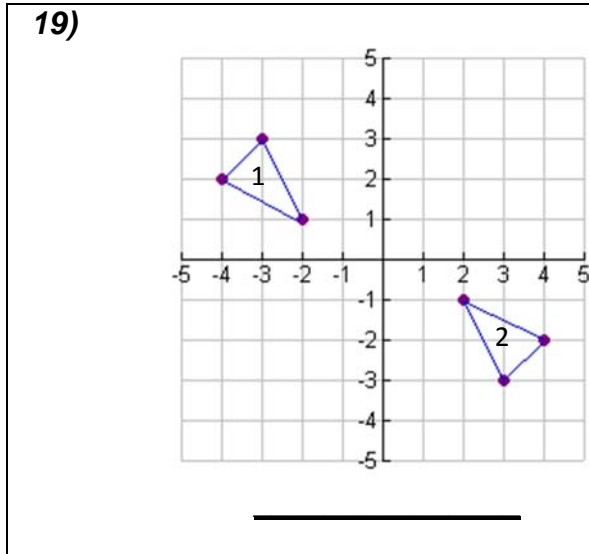


18) Graph and state the coordinates of the image of $B(-3, -3)$ after a rotation 90° counter clockwise around the origin.

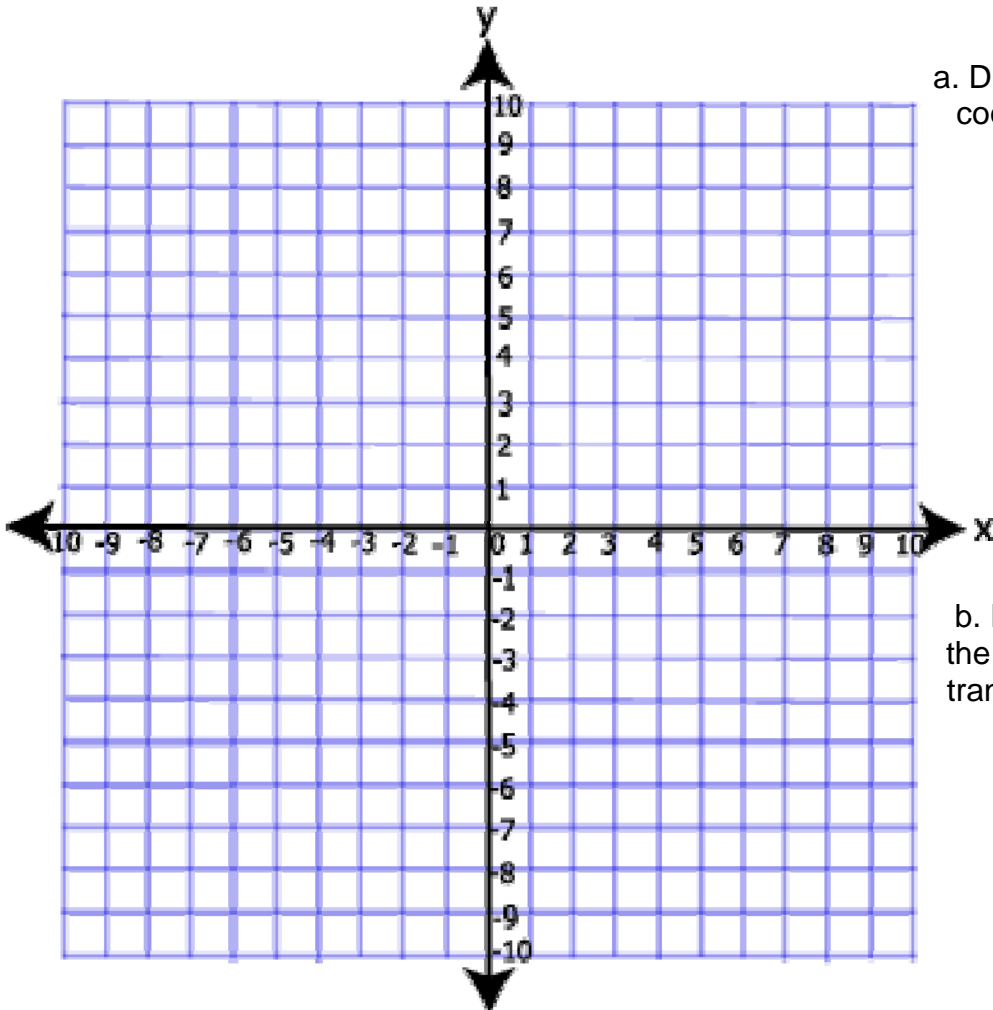


Translations, Reflections and Rotations of 2-dimensional figures:

Directions: Name the Transformation that maps figure 1 to figure 2



21) Use the grid below:

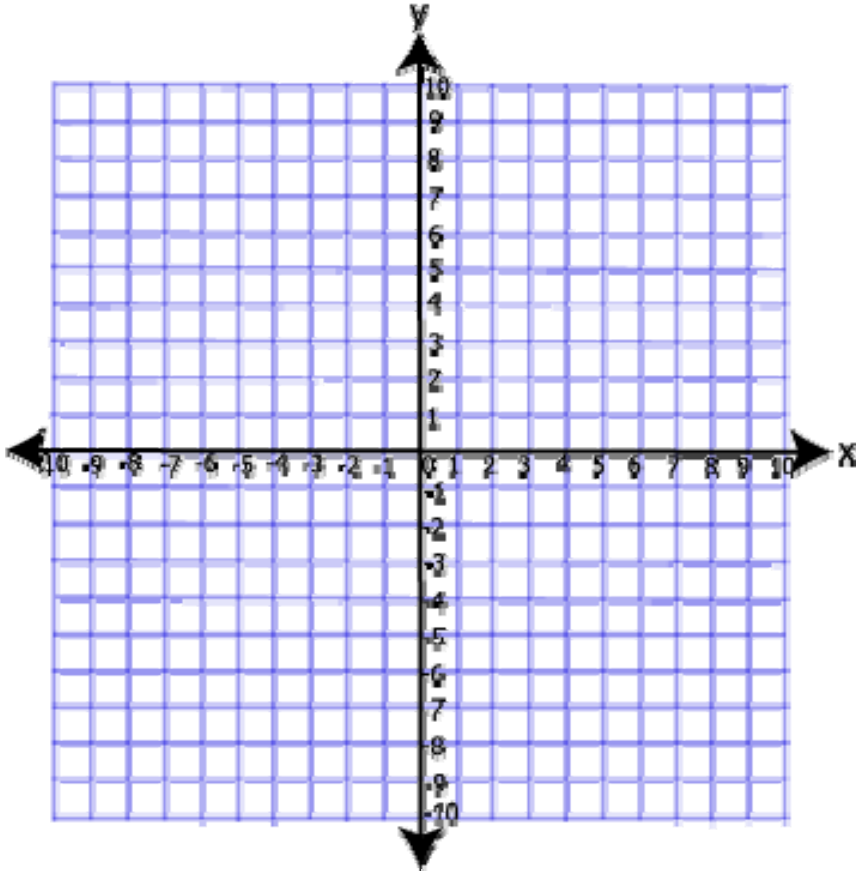


- a. Draw and label triangle ABC if the coordinates are
 A(-2, -2),
 B(2, 0)
 C(3, -3).

- b. Draw and label triangle A'B'C', the image of triangle ABC under a translation whose rule is
 $(x, y) \rightarrow (x - 4, y + 7)$

c. Give the coordinates of triangle A'B'C'.

22) Use the graph below to answer parts a, b, and c.



a. Graph triangle DEF if $D(2, 0)$; $E(8, 0)$; $F(4, 6)$.

b. When triangle DEF is reflected in the x-axis, triangle D'E'F' is created. Plot the points and find the coordinates of triangle D'E'F'.

23) Use the following points to answer the questions below:

$A(1,2)$; $B(6, 2)$; $C(4,5)$

On the graph below graph triangle ABC.

a) Triangle A'B'C' is the image of triangle ABC if it is rotated 90° around the origin.

b) Graph and find the coordinates of the new triangle that you have created.

