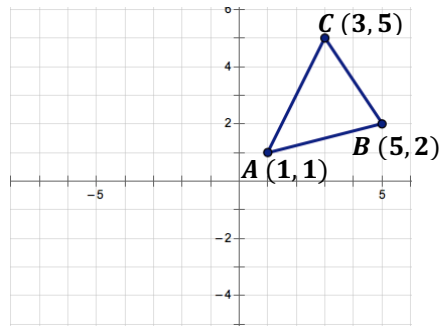**Translate the figure 8 units left and 5 units down.**
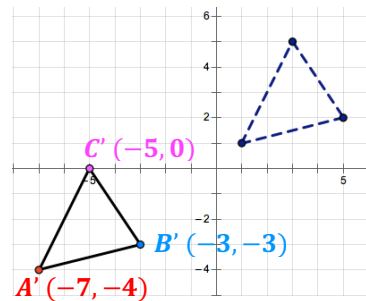
C (3, 5)

B (5, 2)

A (1, 1)

−5

5

Jaxon's "Counting" Method

I moved point A 8 units to the left and 5 units down.

A (1, 1)

A′ (−7, −4)

I moved point B 8 units to the left and 5 units down.

I moved point C 8 units to the left and 5 units down.

C (3, 5)

C′ (−5, 0)

I plotted all the new points to find the new triangle.

C′ (−5, 0)

B′ (−3, −3)

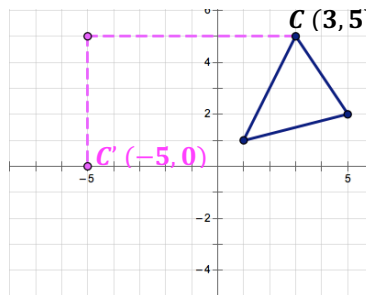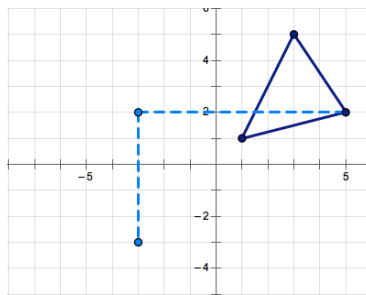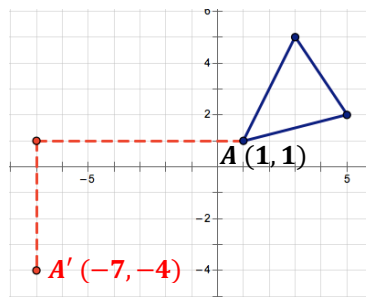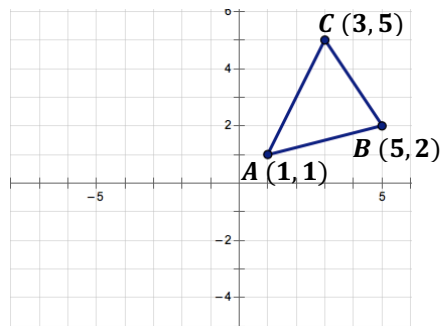A′ (−7, −4)

Translate the figure 8 units left and 5 units down.

$$C\,(3,5)$$
$$B\,(5,2)$$
$$A\,(1,1)$$

Maxine's "Algebraic" Method

$A\,(1,1)$
$1 - 8 = -7$
$1 - 5 = -4$
$A'(-7,-4)$

To move point A 8 units left, I subtract 8 from the x-coordinate, and to move 5 units down, I subtract 5 from the y-coordinate.

$B\,(5,2)$
$5 - 8 = -3$
$2 - 5 = -3$
$B'(-3,-3)$

I did the same thing for point B.

$C\,(3,5)$
$3 - 8 = -5$
$5 - 5 = 0$
$C'(-5,0)$

I did the same thing for point C.

I plotted all the new points to find the new triangle.

$C'(-5,0)$
$B'(-3,-3)$
$A'(-7,-4)$

T.1: *Translation*

Translate the figure 8 units left and 5 units down.

Jaxon's "Counting" Method	Maxine's "Algebraic" Method

I moved point A 8 units to the left and 5 units down.

$A\,(1,1)$
$1 - 8 = -7$
$1 - 5 = -4$
$A'(-7,-4)$

To move point A 8 units left, I subtract 8 from the x-coordinate, and to move 5 units down, I subtract 5 from the y-coordinate.
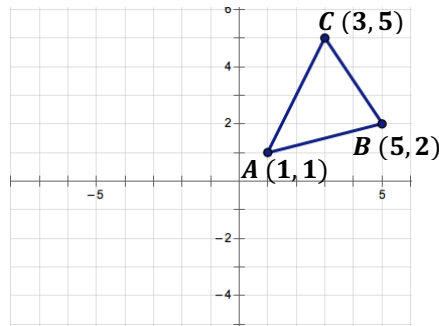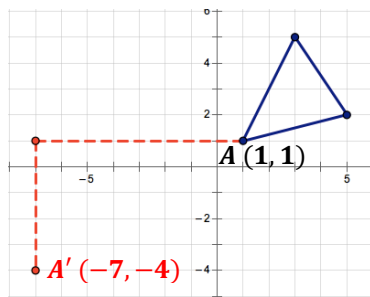
I moved point B 8 units to the left and 5 units down.

$B\,(5,2)$
$5 - 8 = -3$
$2 - 5 = -3$
$B'(-3,-3)$

I did the same thing for point B.

I moved point C 8 units to the left and 5 units down.

$C\,(3,5)$
$3 - 8 = -5$
$5 - 5 = 0$
$C'(-5,0)$

I did the same thing for point C.

I plotted all the new points to find the new triangle.
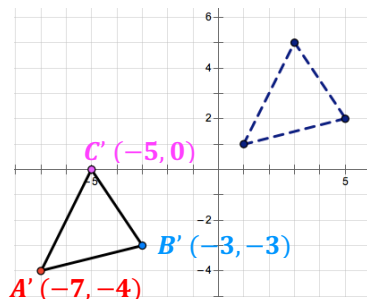

I plotted all the new points to find the new triangle.
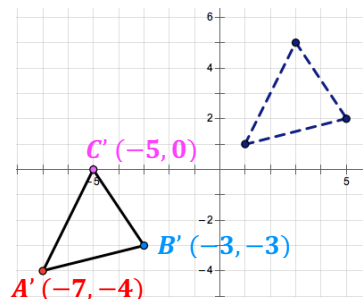
T.1: *Translation*

1) What are the similarities and differences between Jaxon and Maxine's methods?

Similarities	Differences

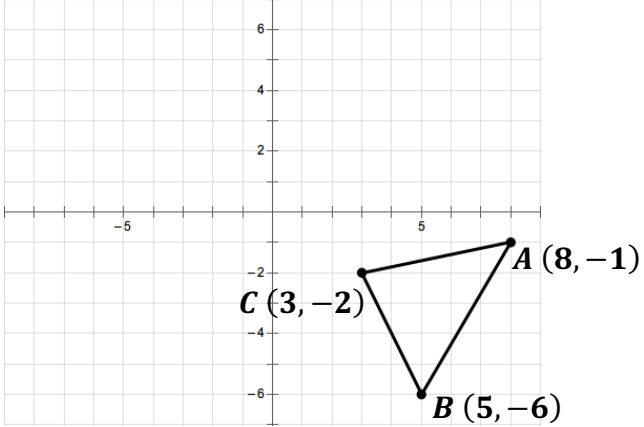2) Use Jaxon and Maxine's methods to translate ΔABC 10 units left and 7 units up.

Jaxon's Method Draw and label the coordinates of your translated figure.	**Maxine's Method** Show your work in the space provided below.
	$A\,(8,-1)$ $B\,(5,-6)$ $C\,(3,-2)$

Graph showing triangle with vertices $A\,(8,-1)$, $C\,(3,-2)$, and $B\,(5,-6)$.

3) Are their translated triangles and their original triangles the same size and shape? Explain your answer.

4) What happens to the coordinates of a figure when it is moved:

    a) to the left?   b) to the right?

    c) down?   d) up?

Translate the figure ... **ft**

Jaxon

I moved
A 8 units to
and 5 units

I moved poi
8 units to the
and 5 units do

I moved point C
8 units to the lef
and 5 units down

I plotted
new point
find t w
tria

I always thought about translations as moving the figure left, right, up, or down, but Maxine showed me you can also translate something by adding or subtracting from the x- and y-coordinates.
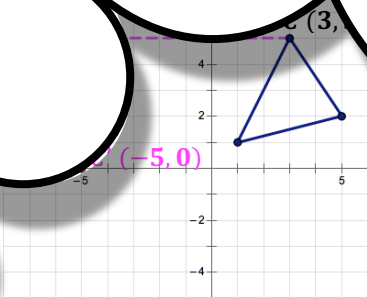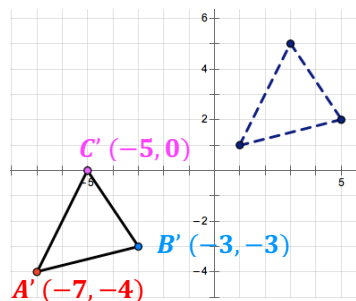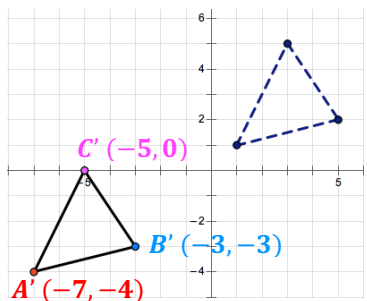
(3,

$= -5$

$5 - 5 = 0$

$C'(-5, 0)$

e.

he same thing
r point B.

I did the same thing
for point C.

I plotted all the
new points to
find the new
triangle.

$C'(-5, 0)$

$(-5, 0)$

$C'(-5, 0)$ $B'(-3, -3)$

$A'(-7, -4)$

$C'(-5, 0)$ $B'(-3, -3)$

$A'(-7, -4)$