Jaxon reflects the quadrilateral over the y-axis. Maxine reflects the quadrilateral over the x-axis.
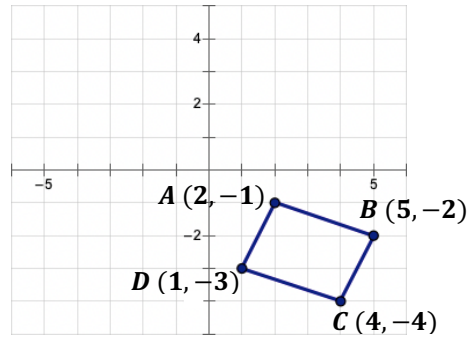
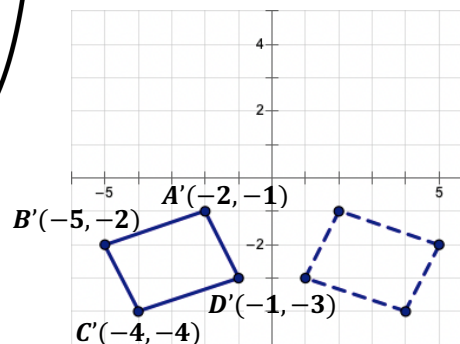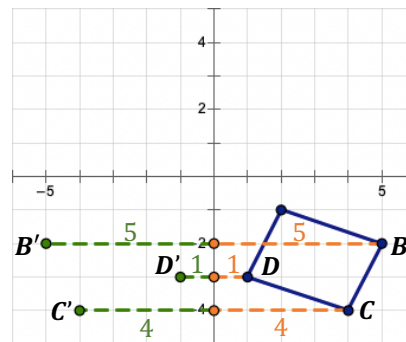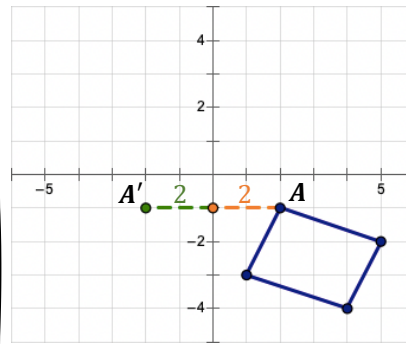A (2, −1) B (5, −2) D (1, −3) C (4, −4)

Jaxon's "Reflection Over the Y-Axis" Method

To reflect the quadrilateral across the y-axis, I count how far point A is to the right of the y-axis. Then to find the reflected point, I move point A' that far left of the y-axis.
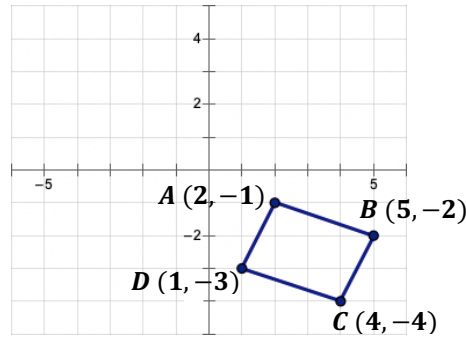
I do the same thing for points B, C, & D.

A' 2 2 A

B' 5 5 B
D' 1 1 D
C' 4 4 C

Then, I plot the points of my reflected figure.

A'(−2, −1)
B'(−5, −2)
C'(−4, −4)
D'(−1, −3)

Jaxon reflects the quadrilateral over the y-axis. Maxine reflects the quadrilateral over the x-axis.

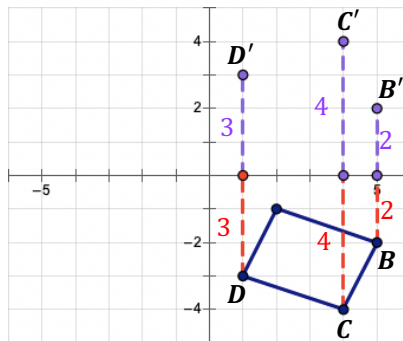A (2, −1)   B (5, −2)   D (1, −3)   C (4, −4)

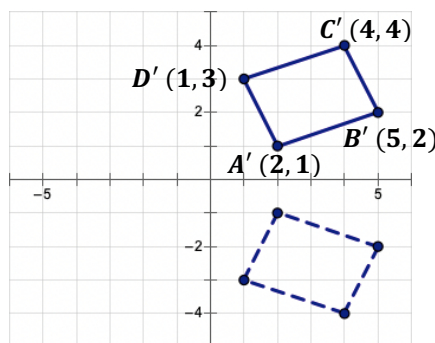| Jaxon's "Reflection Over the Y-Axis" Method	Maxine's "Reflection Over the X-Axis" Method

To reflect the quadrilateral across the x-axis, I count how far point A is below the x-axis. Then to find the reflected point, I move point A' that far above the x-axis.

I use the same method to reflect points B, C, & D.

C' (4, 4)   D' (1, 3)   B' (5, 2)   A' (2, 1)

This is my quadrilateral reflected over the x-axis.

Jaxon reflects the quadrilateral over the y-axis. Maxine reflects the quadrilateral over the x-axis.

A (2, −1)   B (5, −2)   D (1, −3)   C (4, −4)

Jaxon's "Reflection Over the Y-Axis" Method	Maxine's "Reflection Over the X-Axis" Method

To reflect the quadrilateral across the y-axis, I count how far point A is to the right of the y-axis. Then to find the reflected point, I move point A' that far left of the y-axis.

I do the same thing for points B, C, & D.

Then, I plot the points of my reflected figure.

A'(−2, −1)   B'(−5, −2)   C'(−4, −4)   D'(−1, −3)

To reflect the quadrilateral across the x-axis, I count how far point A is below the x-axis. Then to find the reflected point, I move point A' that far above the x-axis.
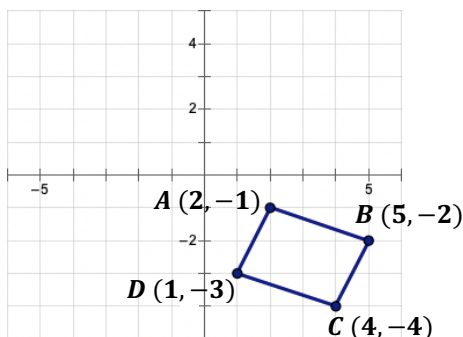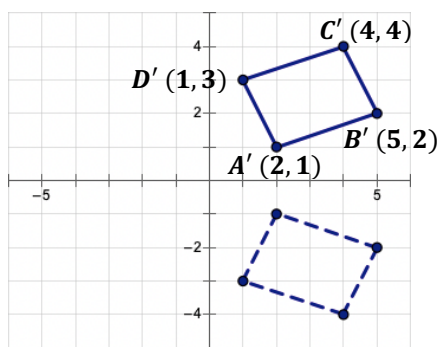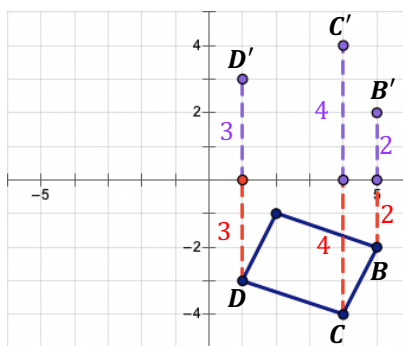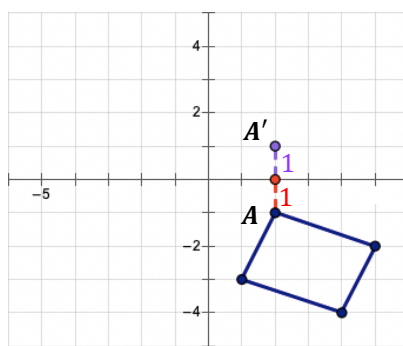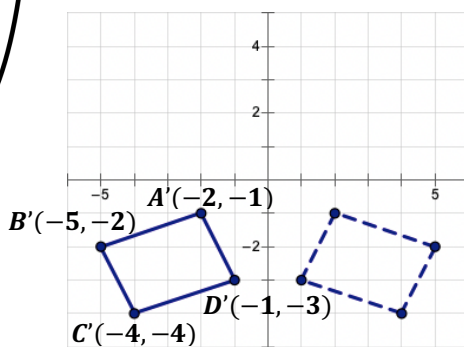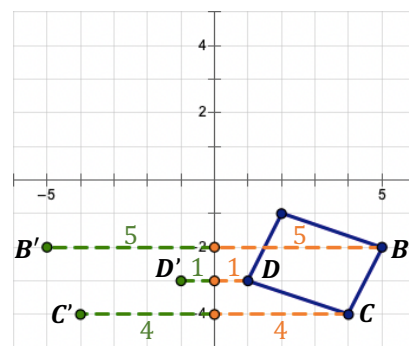
I use the same method to reflect points B, C, & D.

This is my quadrilateral reflected over the x-axis.

C' (4, 4)   D' (1, 3)   B' (5, 2)   A' (2, 1)

T.2: *Reflection*

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

Similarities	Differences

2) Reflect trapezoid *ABCD* over the x-axis. Draw and label the coordinates of your reflected figure.

D (−4, 1)   **C** (1, 1)

A (−2, −3)   **B** (1, −3)

3) Reflect trapezoid *ABCD* over the line $x = 3$. Draw and label the coordinates of your reflected figure.

$x = 3$

D (−4, 1)   **C** (1, 1)

A (−2, −3)   **B** (1, −3)

4) Explain what happens to the coordinates of a figure when you reflect it over:

a) the x-axis?   b) the y-axis?

Jaxon reflects the quadrilateral over the y-a̶̶̶̶̶̶ ̶ ̶ ̶ ̶ ̶ ̶ quadrilateral over the x-axis.

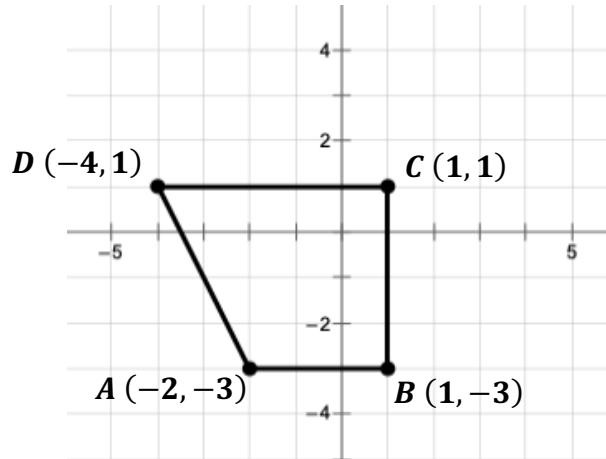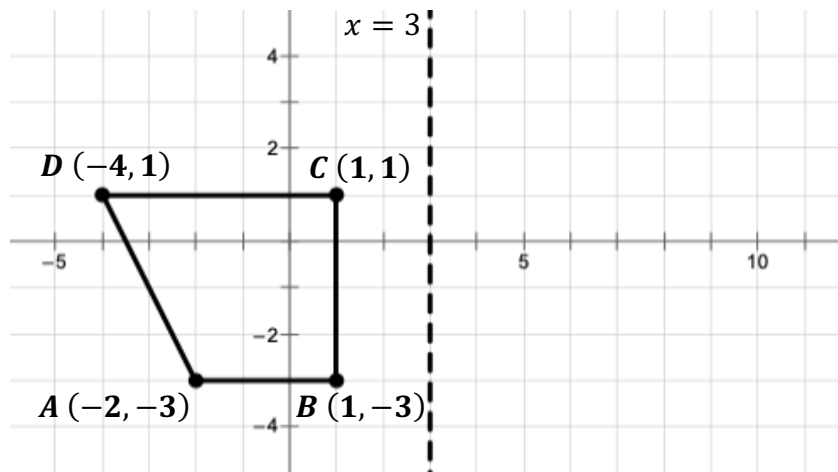When I reflected over the x-axis, my y-values changed. When Jaxon reflected over the y-axis, his x-values changed.

I wonder if there are lines of reflection where both values change.

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To reflect the
quadrilateral across
the x-axis, I count
how far point A is
below the x-axis.
Then to find the
reflected point, I
move point A' that
far above the x-axis.

I use the same
method to reflect
points B, C, & D.

C'

4 *B'*

2

2

C'
4

Then, I plot the points of my reflected figure.

D' (1,3)

A' (2,1)

A'(−2,−1)

B'(−5,−2)

D'(−1,−3)

C'(−4,−4)

This is my quadrilateral reflected over the x-axis.