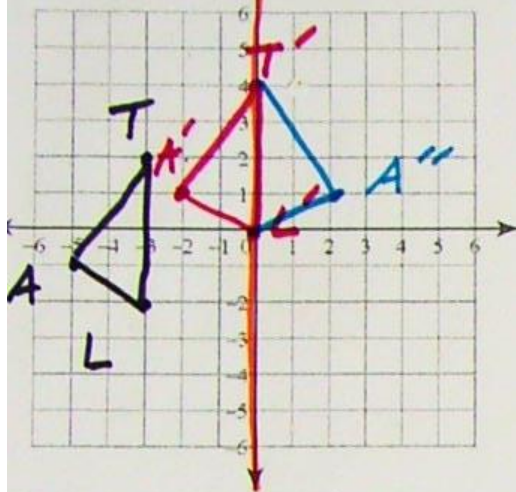Geometry – Composite Transformations

right+3 up2

Name: _____
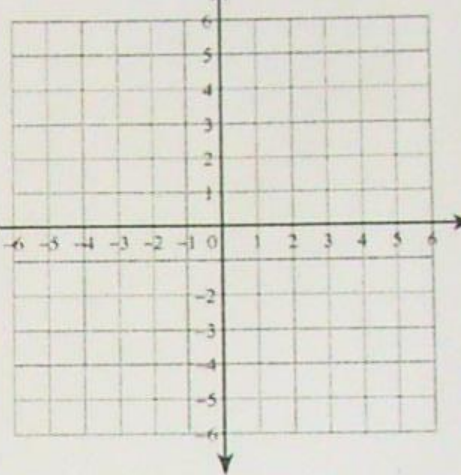
Now we are going to explore if the order in which you to multiple transformations matters.

a) Translate △ ALT if A(-5,-1), L(-3,-2), T(-3,2) by the rule (x, y)→(x + 3, y + 2), then reflect the image over the y-axis

A' (-2 , 1)

L' (0 , 0)

T' (0 , 4)

A'' (2 , 1)

L'' (0 , 0)

T'' (0 , 4)

b) Reflect △ ALT if A(-5,-1), L(-3,-2), T(-3,[?]) over the y-axis, then translate the image by the rule (x, y)→(x + 3, y + 2),
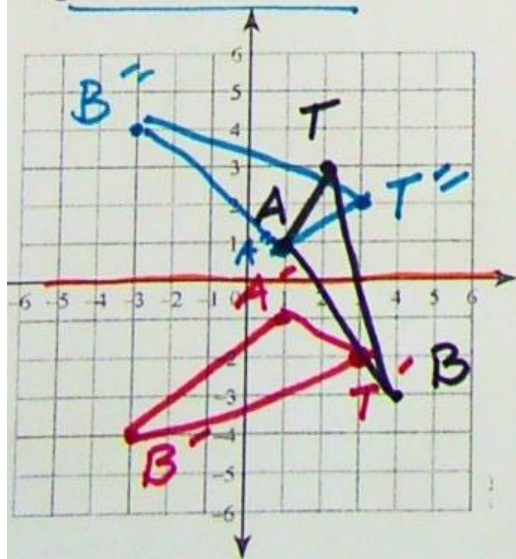

A' (___ , ___)

L' (___ , ___)

T' (___ , ___)

A'' (___ , ___)

L'' (___ , ___)

T'' (___ , ___)

Did the order you did the transformations change the final image? _____

So, does order matter? _____
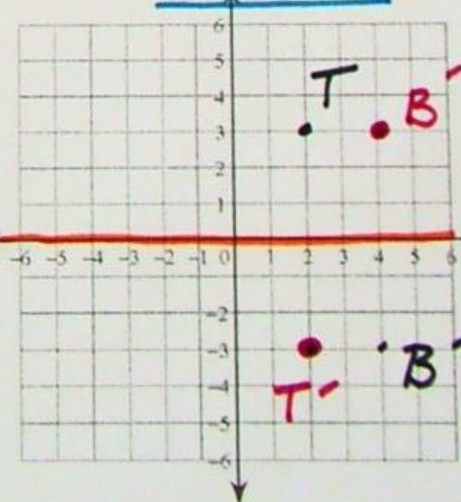
What about with rotations and reflections? (Think about)

c) Rotate △ TAB if T(2,3), A(1,1), B(4,-3) 90° clockwise about the origin, then reflect the image over the line x-axis.

T' (3 , -2)

A' (1 , -1)

B' (-3 , -4)

T'' (3 , 2)

A'' (1 , 1)

B'' (-3 , 4)

d) Reflect △ TAB if T(2,3), A(1,1), and B(4,-3) over the x-axis, then rotate the image 90° clockwise about the origin

T' (___ , ___)

A' (___ , ___)

B' (___ , ___)

T'' (___ , ___)

A'' (___ , ___)

B'' (___ , ___)

Did the order you did the transformations change the final image? _____