

Multiple Transformations

Name: _____

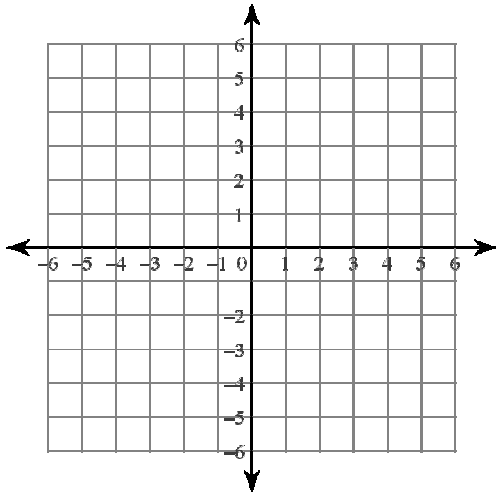
Hour: 1 2 3 4 5 6 7

You should already know how to do the following:

- Translations (slides)
- Reflections (flips, like with a mirror)
- Rotations (spins or turns)

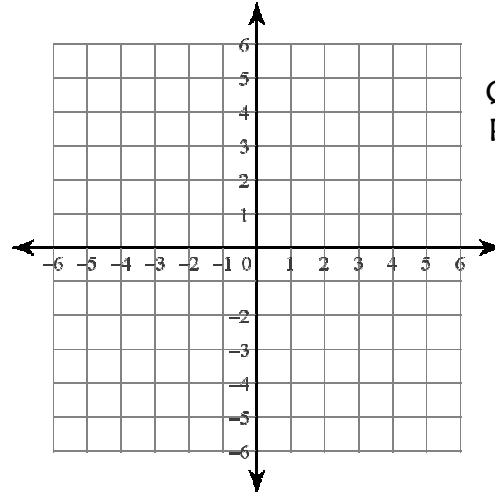
Let's review to get "warmed-up".

1a) Translate $\triangle QRS$ if $Q(4,1)$, $R(1,-2)$, $S(2,3)$ by moving it left 3 and down 4.



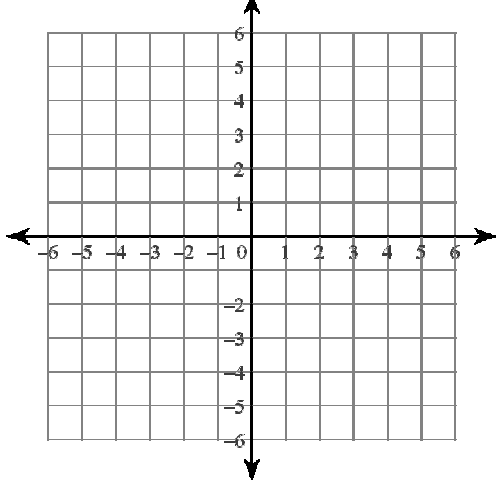
Q' (____, ____)
 R' (____, ____)
 S' (____, ____)

1b) Reflect $\triangle Q'R'S'$ if $Q'(1,-3)$, $R'(-2,-6)$, and $S'(-1,-1)$ over the x-axis.



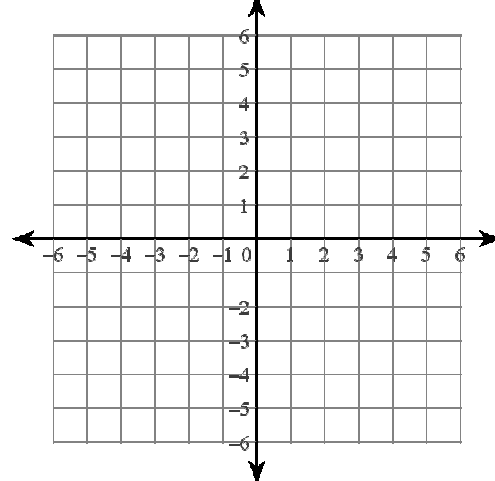
Q'' (____, ____)
 R'' (____, ____)
 S'' (____, ____)

2a) Rotate $\triangle CAR$ if $C(-1,-4)$, $A(2,6)$, $R(-4,-2)$ 180° around the origin.



C' (____, ____)
 A' (____, ____)
 R' (____, ____)

2b) Reflect $\triangle C'A'R'$ if $C'(1,4)$, $A'(-2,-3)$ and $R'(3,2)$ over the y-axis.

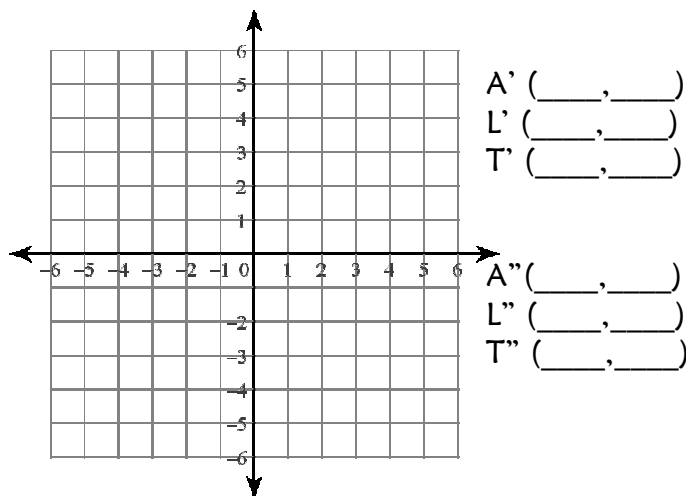


C'' (____, ____)
 A'' (____, ____)
 R'' (____, ____)

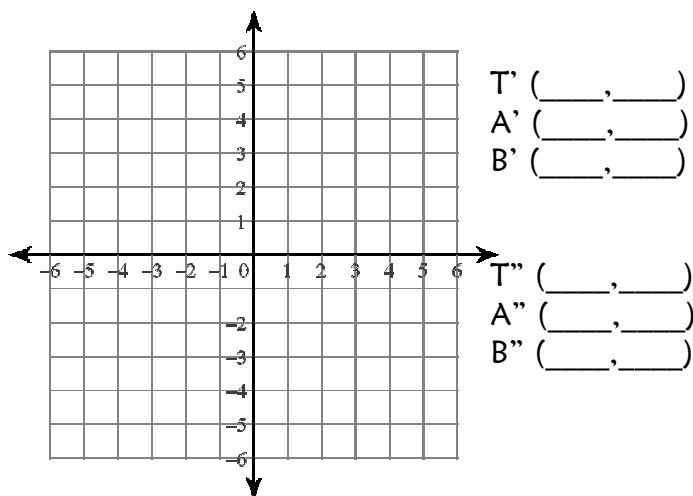
3) What do you notice in problems 1 & 2? What changes about the shapes? What doesn't change?

On the back page you are going to try some multiple transformations.

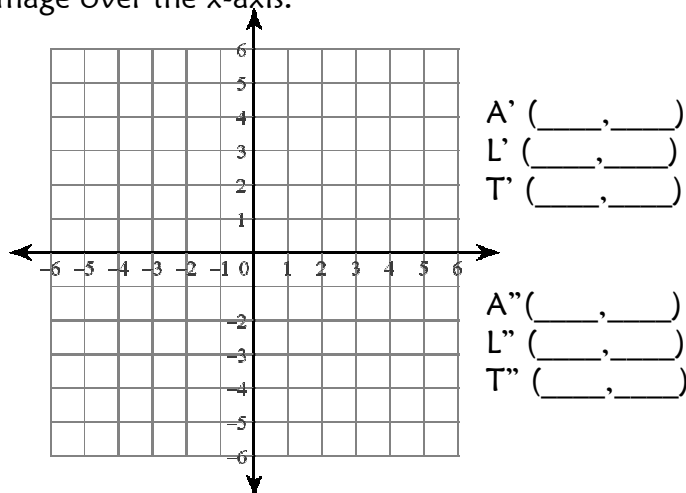
4) Translate $\triangle ALT$ if $A(-5,-1)$, $L(-3,-2)$, $T(-3,2)$ by moving it right 6 and down 3, then reflect the image over the y-axis.



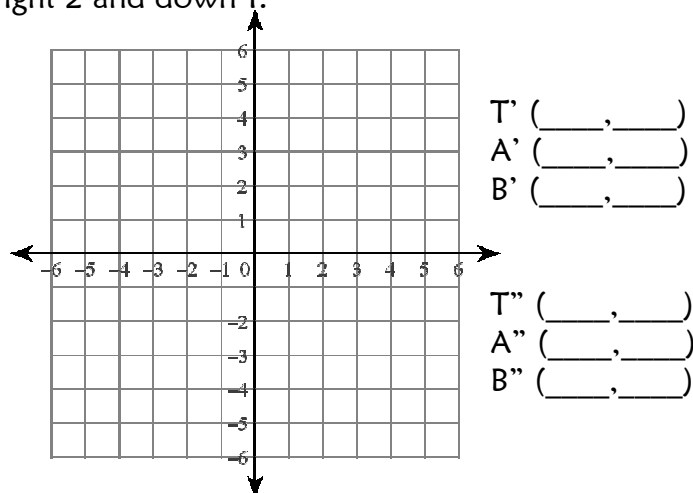
5) Reflect $\triangle TAB$ if $T(2,3)$, $A(1,1)$, and $B(4,-3)$ over the x-axis, then reflect the image over the y-axis.



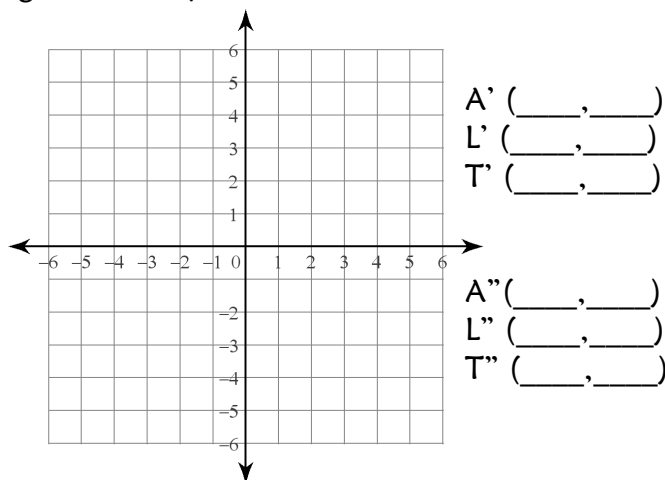
6) Rotate $\triangle ALT$ if $A(-5,-1)$, $L(-3,-2)$, $T(-3,2)$ 90° clockwise around the origin, then reflect the image over the x-axis.



7) Reflect $\triangle TAB$ if $T(2,3)$, $A(1,1)$, and $B(4,-3)$ over the y-axis, then translate the image by moving it right 2 and down 1.



9) Rotate $\triangle ALT$ if $A(-5,-1)$, $L(-3,-2)$, $T(-3,2)$ 180° clockwise around the origin, then reflect the image over the y-axis.



10) Reflect $\triangle TAB$ if $T(2,3)$, $A(1,1)$, and $B(4,-3)$ over the x-axis, then translate the image by moving it left 5 and down 4.

