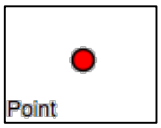
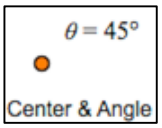
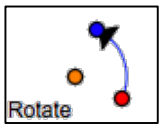
Rotate 1 Name(s):

1. Create *independent variable* x by tapping the 

tool. Tap or drag to locate x in the sketch. Then drag x around.

2. Create a *function rule* for rotation by tapping the 

tool. Tap or drag to place the glowing objects: center C and angle θ.

3. Create the *dependent variable* by tapping the 

tool. Attach each glowing object: x to x, C to C, and θ to θ. Point $R_{C,\theta}(x)$ is the "rotation around C by θ of x."

4. Tap the angle value to make it 180°.

Q1 Turn on traces and vary x to make a shape. Draw your traces in the box on the right. Be sure to show x, C, and $R_{C,\theta}(x)$.

$\theta = 180°$

Q2 Compare the speed of x and $R_{C,\theta}(x)$. Which is faster, or are their speeds the same?

Q3 On page 2 construct a rotate function using a different angle. Drag x to make a different shape, and draw the traces. Remember to show x, C, and $R_{C,\theta}(x)$.

$\theta =$ ____°

Q4 Drag x again to try to find fixed points (where x and $R_{C,\theta}(x)$ come together). How many could you find, and where were they?