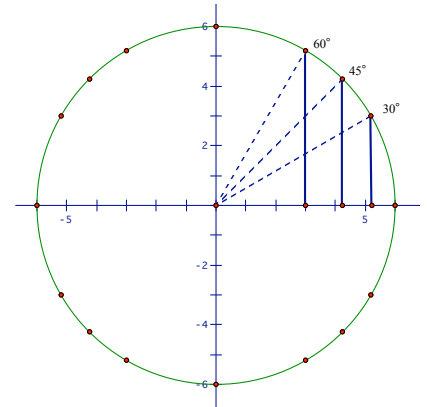


DON'T FORGET THAT A UNIT CIRCLE HAS A RADIUS OF _____!

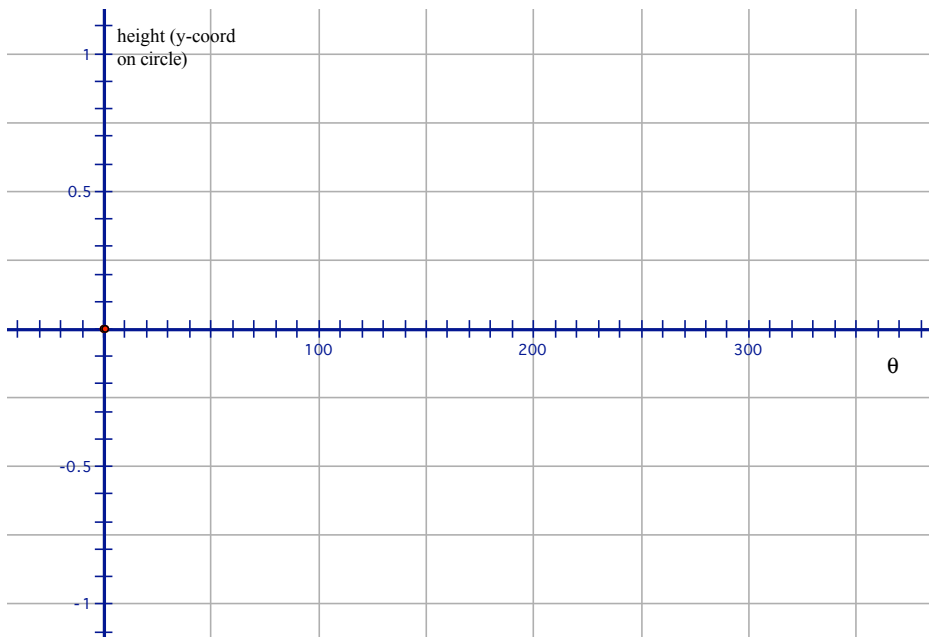
1. Pretend your unit circle is a ferris wheel with radius 1 unit. You are riding around it on a graph. Fill in the table below of the rider's *height above the center* for each angle (that is, the *y*-coordinate). You can copy these values from your unit circle sheet.

Angle θ	0°	30°	45°	60°	90°	120°	135°	150°
height								

Angle θ	180°	210°	225°	240°	270°	300°	315°	360°
height								



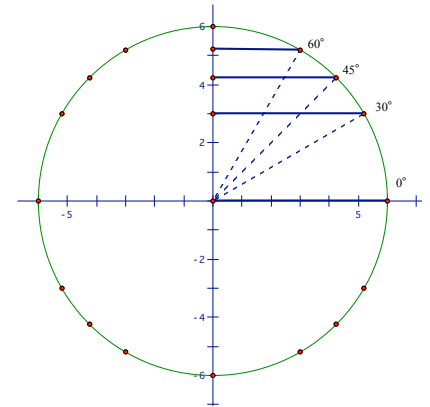
2. Now, plot the rider's height vs. angle on the graph below. Use your calculator to get decimal approximations to put on the graph. Do your best to connect your points with a smooth curve.



3. Find all the points where the rider's height is the same as the center of the circle. Label them on the graph with a star.
4. Find the point where the rider is at the top of the wheel. Label it "MAX" on the graph. Label the lowest point "MIN".

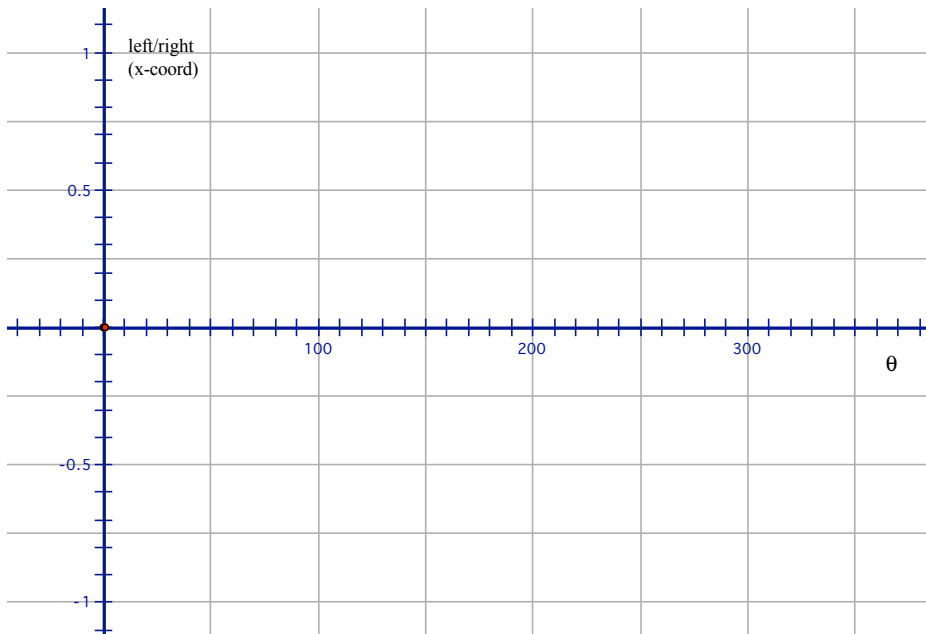
5. Now, you want to graph the change in your left-right positioning as you ride around the unit circle wheel. Fill in the table below of the rider's *position to the left or right of the center* for each angle (that is, the x-coordinate). You can copy these values from your unit circle sheet.

Angle θ	0°	30°	45°	60°	90°	120°	135°	150°
Left/right								



Angle θ	180°	210°	225°	240°	270°	300°	315°	360°
Left/right								

6. Now, plot the rider's left/right position vs. angle on the graph below. Use your calculator to get decimal approximations to put on the graph. Do your best to connect your points with a smooth curve.



7. Find all the points where the rider's left/right position is lined up with the center of the circle. Label them on the graph with a star.
8. Find the point where the rider is at the right-most point on the wheel. Label it "RIGHT" on the graph. Label the left-most point "LEFT".