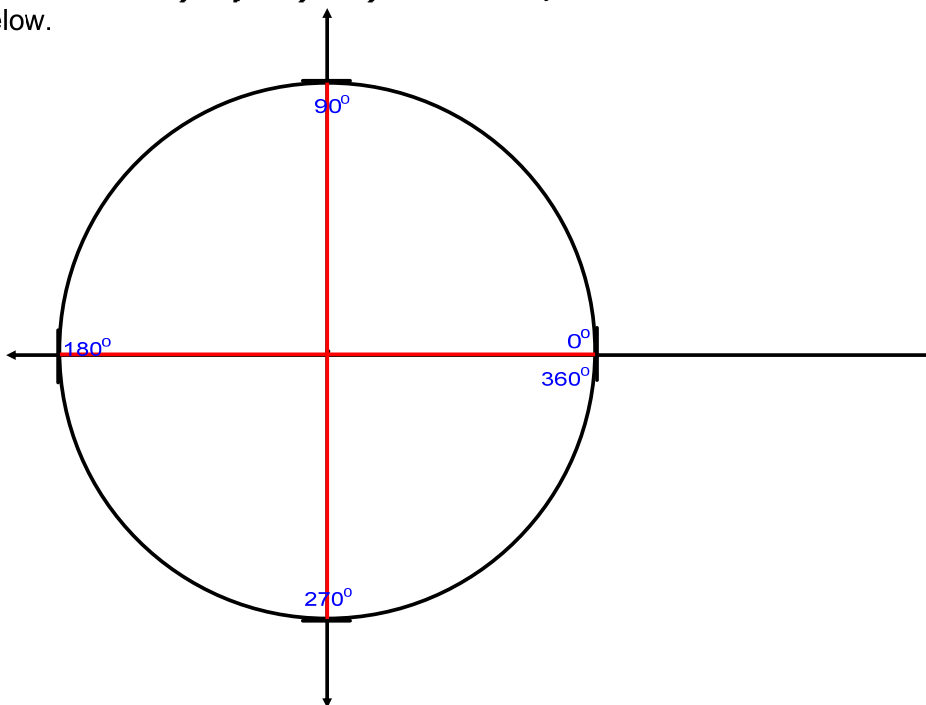
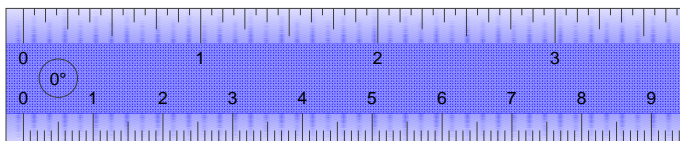
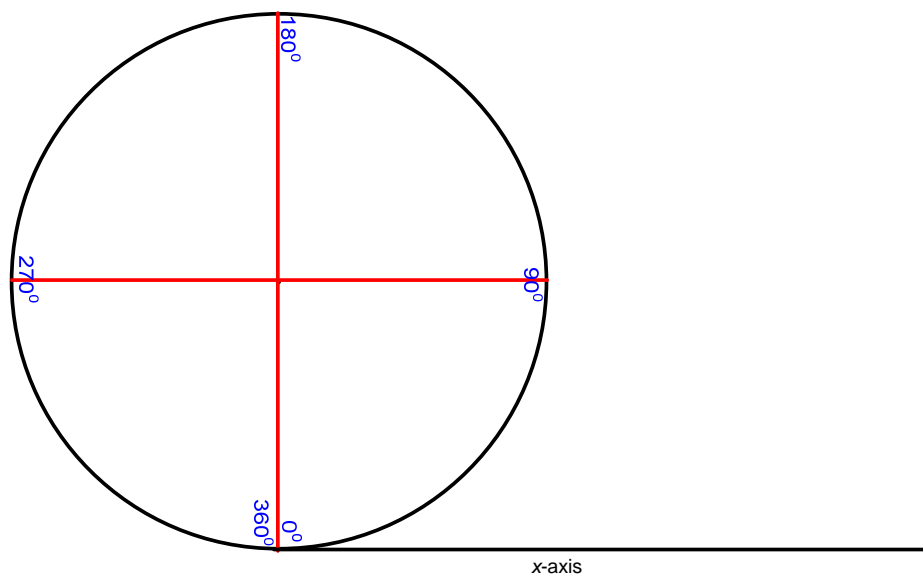


wk3_d1.notebook

Place your unit circle on the provided xy grid, with the center at the origin. The circle should fit inside all of your 1" marks. Draw the two diameters and mark the 0° , 90° , 180° , 270° , and 360° on your unit circle as shown below.

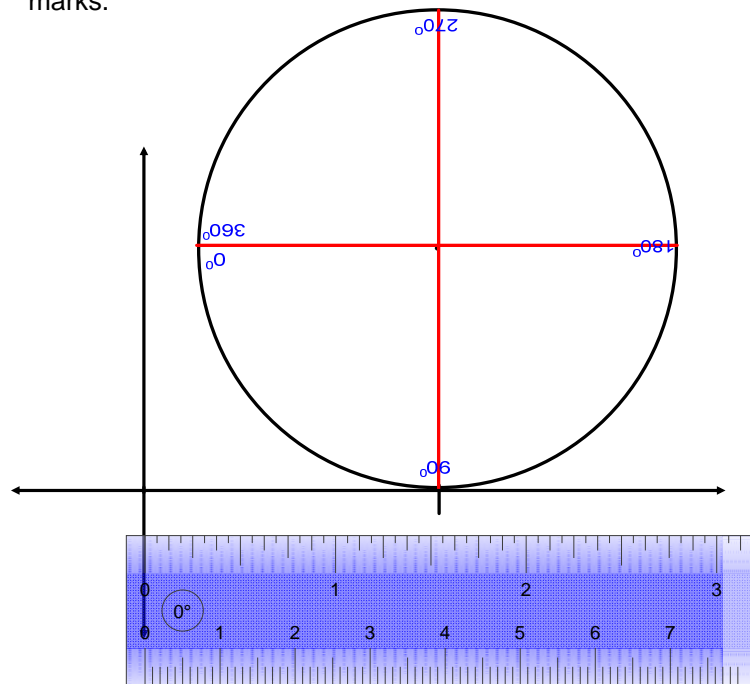


Stand your circle up with the 0 degree mark at the origin.



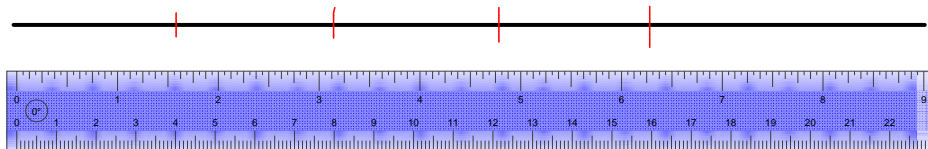
wk3_d1.notebook

Stop rolling at the 90 degree mark and make a mark on the x-axis. Continue to roll the circle, making marks on the x-axis as you also get to the 180, 270 and 360 degree marks.



Use a ruler to measure from the origin to each mark that you made. We will collect a few different measurements and average them to see how close we are to the real values.

90° 180° 270° 360°



$1 \frac{9}{16}$

$3 \frac{1}{8}$

$4 \frac{3}{4}$

$6 \frac{1}{4}$

$$1 \frac{9}{16} = 1.5625$$

$$3 \frac{1}{8} = 3.125$$

$$4 \frac{3}{4} = 4.75$$

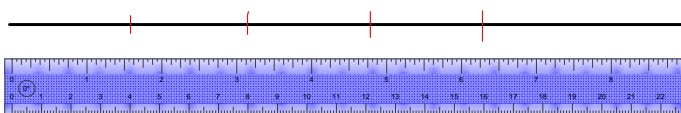
$$6 \frac{1}{4} = 6.25$$

Circumference of a Circle : $C = 2 \pi r$

Since our circle has a radius of 1 (one) the circumference is $2\pi r = 2\pi(1) = 2\pi$

So that tells us that $360^\circ = 2\pi$ $270^\circ =$
 $180^\circ =$ $90^\circ =$

$\pi/2$ π $3\pi/2$ 2π
 90° 180° 270° 360°



$1 \frac{9}{16}$	$3 \frac{1}{8}$	$4 \frac{3}{4}$	$6 \frac{1}{4}$
1.5625	3.125	4.75	6.25

$\pi/2 = 1.57$ $\pi = 3.14$

$3\pi/2 = 4.71$ $2\pi = 6.28$