



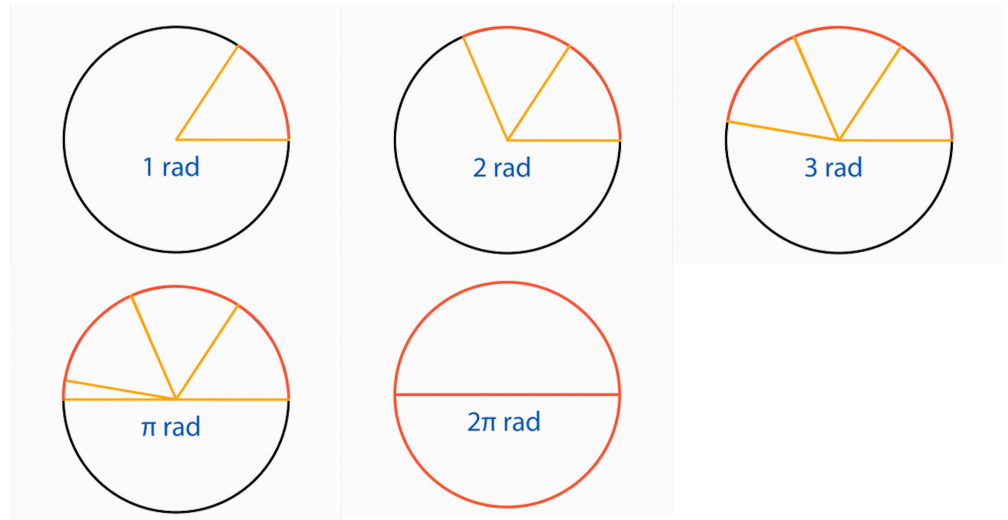
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What is Pi?

Pi, which is represented by the Greek letter π , is a number that is famously used to find the area and circumference of a circle. Though the decimal technically never ends, we usually simplify the number to just 5 digits: 3.1415. You can also turn it into the fraction $\frac{22}{7}$. This number can be used in several different areas of math, from simply measuring the area and diameter of a circle all the way to determining arc lengths and volumes of 3D objects.

Radians and Degrees

Pi is used along with radians and degrees to measure angles. A radian is defined as an arc that has the same measure as the radius of a circle. Since π diameters equal circumference, 2π radius lengths also equals circumference. Therefore, 360 degrees is the same as 2π radians, 180 degrees equals π radians, 90 degrees equals $\pi/2$ radians, etc.



- To convert from degrees to radians, multiply the angle's measure by $\frac{\pi}{180^\circ}$
- To convert from radians to degrees, multiply the angle's measure by $\frac{180^\circ}{\pi}$

Try it yourself!

1. Convert the angle $\frac{5\pi}{9}$ radians to degrees.

2. Convert the angle 240° to radians.

Don't forget to show your work!

1. Since you multiply the angle's measure by $\frac{\pi}{180^\circ}$ to convert radians to degrees, simply multiply $\frac{5\pi}{9}$ times $\frac{180^\circ}{\pi}$, which equals 100° .

2. Since you multiply the angle's measure by $\frac{\pi}{180^\circ}$ to convert from degrees to radians, simply multiply 240° by $\frac{\pi}{180^\circ}$, which equals $\frac{4\pi}{3}$ radians.

