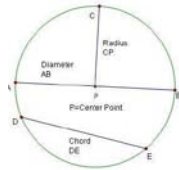


Circles: Where they come from and what they are about



Circles are found to be used all the way back to bible times. When King Solomon built the temple, circles were used (about 950 BC). In about 1889, Euclid was the first person to use the number pi (3.14...) in an equation of a circle.



Circles have a radius (r), diameter (d), area (A), and circumference (C). The equation to find the diameter, given the radius, is by

multiplying the radius by 2. The equation to find the area of a circle is given by πr^2 . The equation to find the circumference of a circle is given by πd or $2\pi r$.

Pi is a number that has been used in bible times, Egyptians, and Greeks. In bible times $\pi = 3$. In the Egyptian times $\pi = 3.16$. In the Greek times $\pi = 3.14$; Pi is an infinite number. There is no number like it. We use pi today in geometrical equations to symbolize a number 3.14.

The problem: I only have my feet and a ruler, how am I going to find the area and circumference of a circle?

Given: Ruler, shoes, calculator, and formulas

1. We need to measure our shoes in inches.

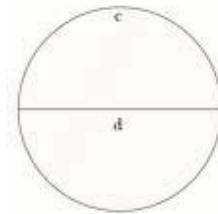


2. Find a circle on the ground near your area.



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3. Find one side of the circle that cuts the circle in half such that we can walk toe to heel across the circle.



4. Walk toe-heel across the circle and count how many steps it is to reach the other side.

5. Take the number of steps and multiply it by how many inches your shoe is.

6. We have found the diameter of a circle. Now plug in your results to the formula to find the Circumference and Area of a circle.

7. A fun fact: Take the Circumference you have found and divide it by the diameter of your circle. See what you get. The answer should be pi (). Do the process again on different size circles to see if you get pi.

A few other applications of circles are finding how many bricks are in one circle and finding the area of a donut shape.