Circle Vocabulary

Essential Circle Vocabulary Unit: Circles

Symbols

Divide

You will learn a new way to think about familiar symbols; for instance did you know a fraction is a division problem!!!!

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Three Ways to Write Division Problems

$29 \div 8$	$8\overline{)29}$	$\frac{29}{8}$
$37 \div 9$	$\overline{\quad)\quad}$	$\frac{\quad}{\quad}$
$25 \div 7$	$\overline{\quad)\quad}$	$\frac{\quad}{\quad}$
$21 \div 6$	$\overline{\quad)\quad}$	$\frac{\quad}{\quad}$
$47 \div 5$	$\overline{\quad)\quad}$	$\frac{\quad}{\quad}$
$59 \div 4$	$\overline{\quad)\quad}$	$\frac{\quad}{\quad}$
$46 \div 7$	$\overline{\quad)\quad}$	$\frac{\quad}{\quad}$
$28 \div 9$	$\overline{\quad)\quad}$	$\frac{\quad}{\quad}$

Fractions as Division

The fraction on the right can be rewritten as 1 ÷ 3

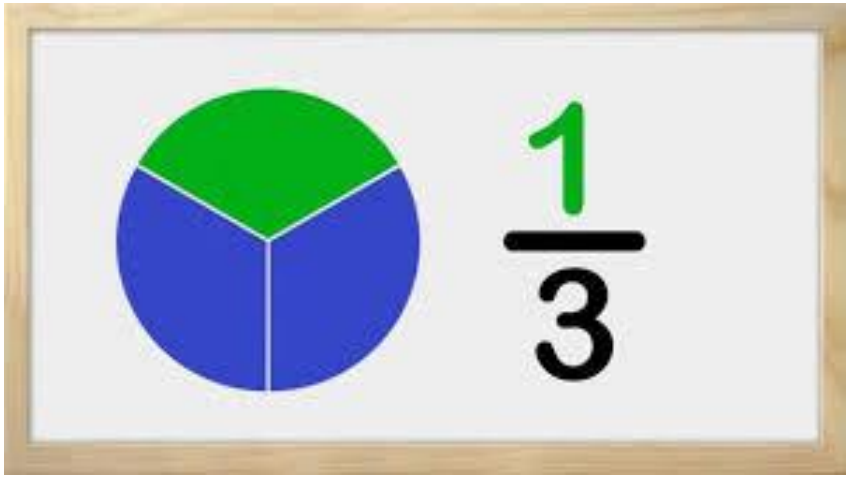
Use your calculator to divide 1 by 3

Enter 1

Enter ÷

Enter 8

Enter =

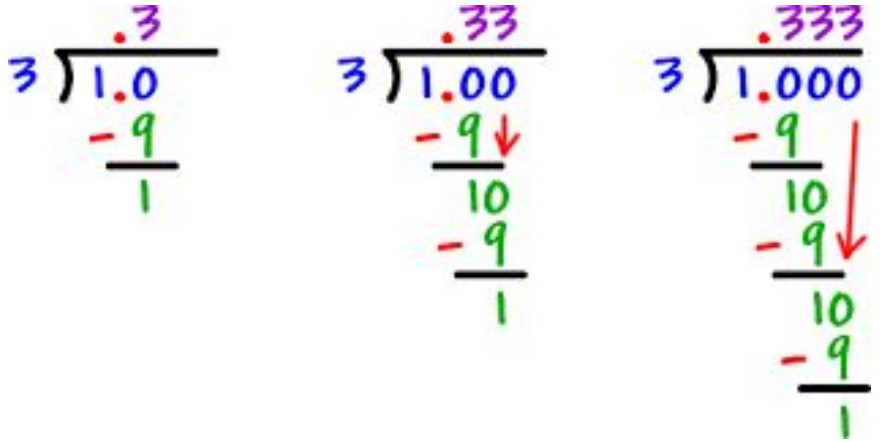


One Third (⅓)

An example of one third written as a long division problem is given on the right.

Do you notice that no matter how many times we subtract three groups of 3 (9) from the remainder of 10 we never can complete or end the problem.

In fact we could spend the next ten years bring down the zero and subtracting three groups of 3 for the next ten, twenty, or even thirty years-even 100 years, and we would never end.



Irrational Numbers

So, what do we do if we don't want to spend the next 10 years working on a division problem? Numbers like ⅓ that never "end" are called irrational numbers. We usually just "round them" to the nearest hundredth, or just simply leave them as a fraction.

⅓ = .33

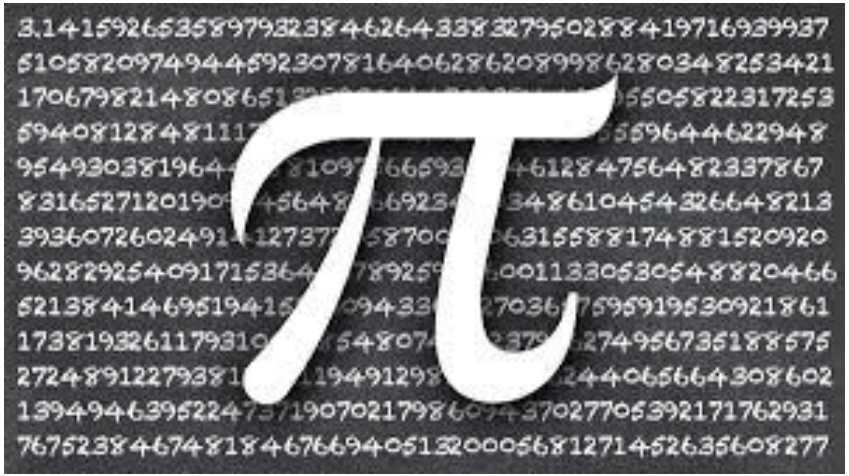
Pi

This symbol may be new to you, or you may have seen it before in math class.

This symbol stands for an irrational number called Pi (like the kind you eat).

There's even a special day for pie day (3/14). Can you guess why March 14th is Pi Day?

See all those numbers? Those are the numbers that come after the decimal point for the number 22/7 This is only a small number of them.

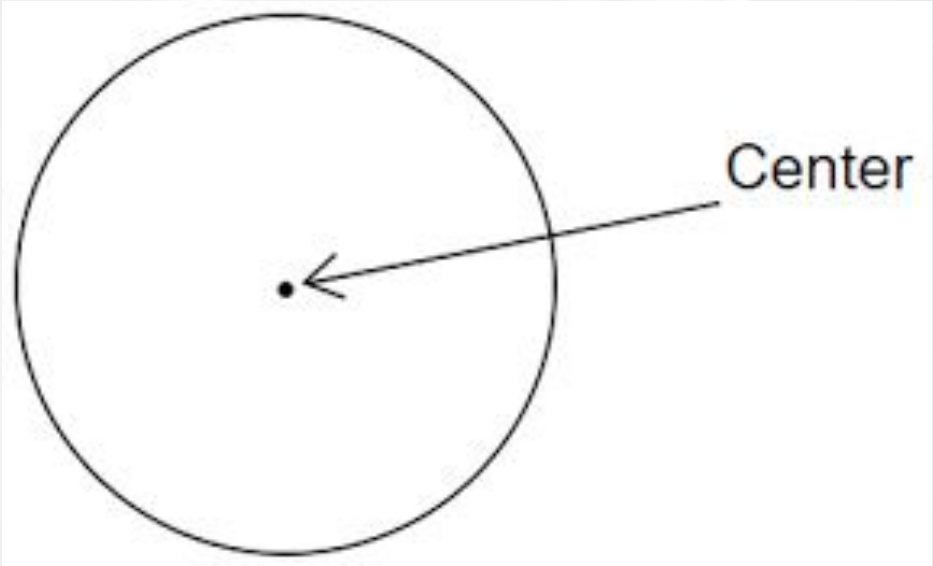


Circle Definition

Center

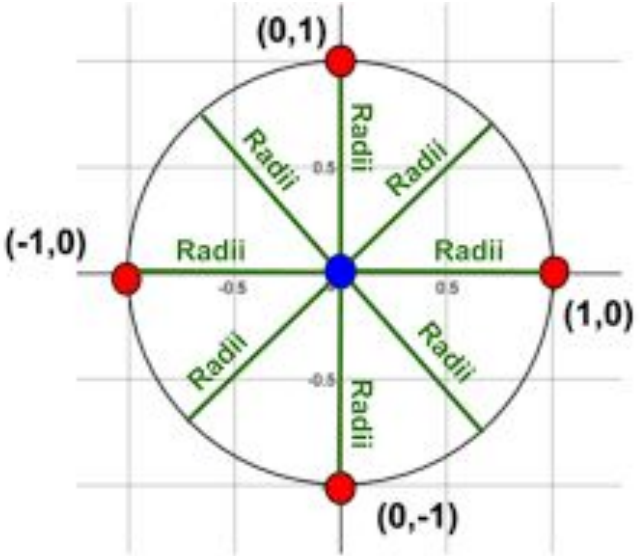
It is important to know where the exact center (middle) of the circle is located.

Notice the *point* located at the center of the circle.



Circle

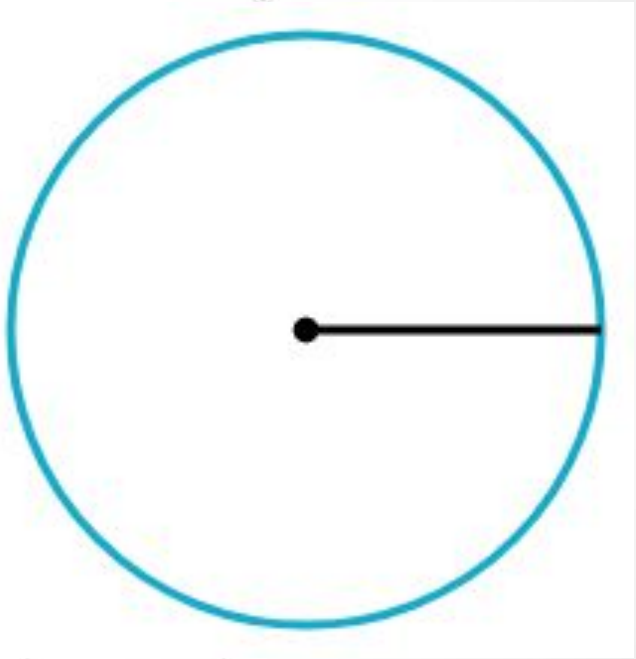
A circle is the set of all points in a plane that are at an equal distance from the center



Radius

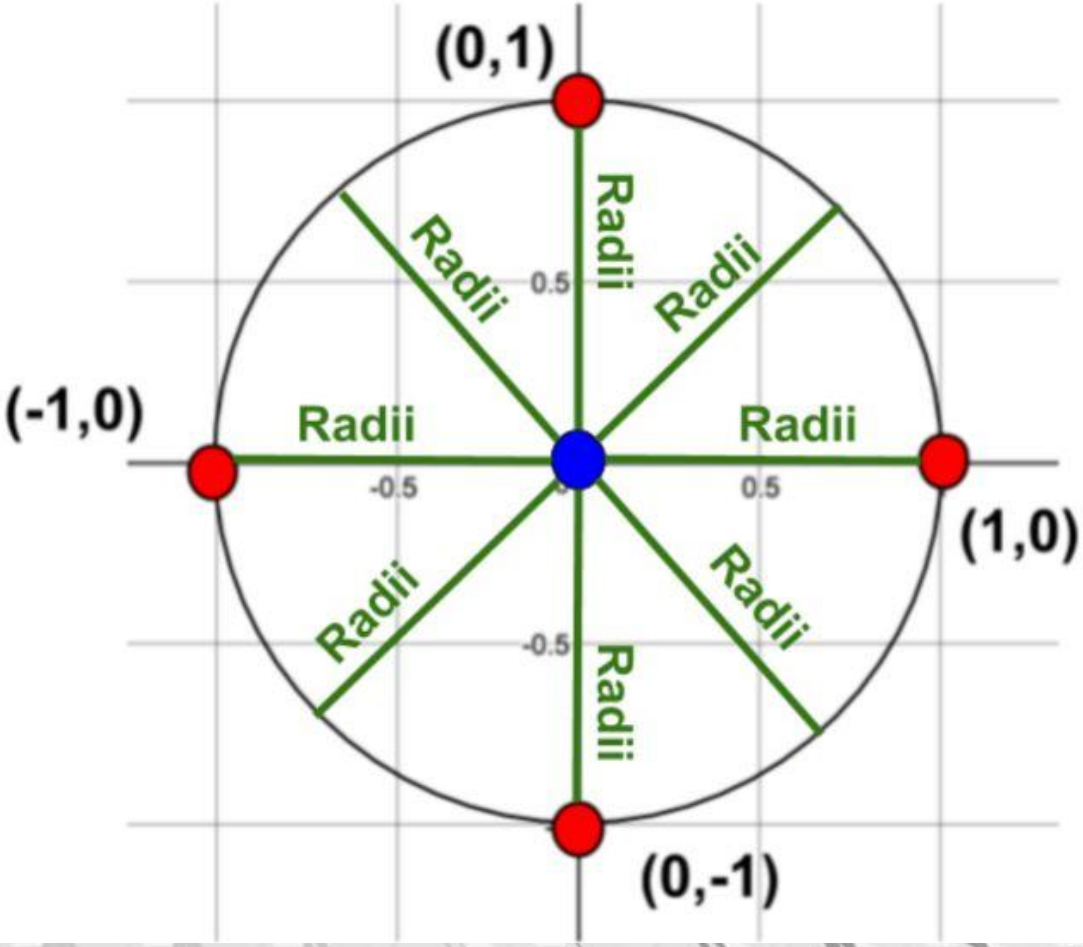
Radius

A radius is a segment that has one endpoint at the center of the circle and one on the circumference.



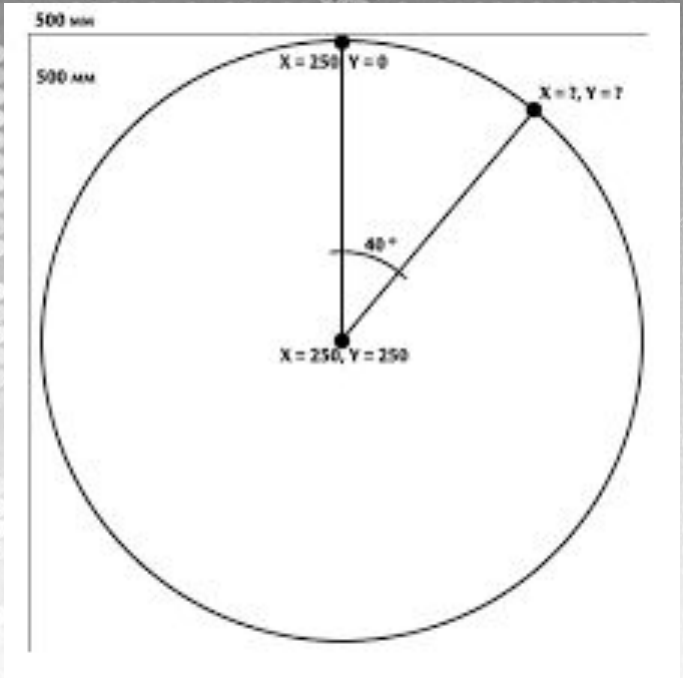
Congruent

Note that all radii of a circle are congruent



Radiuses

Any two radiuses in a circle will form an angle that can be measured.

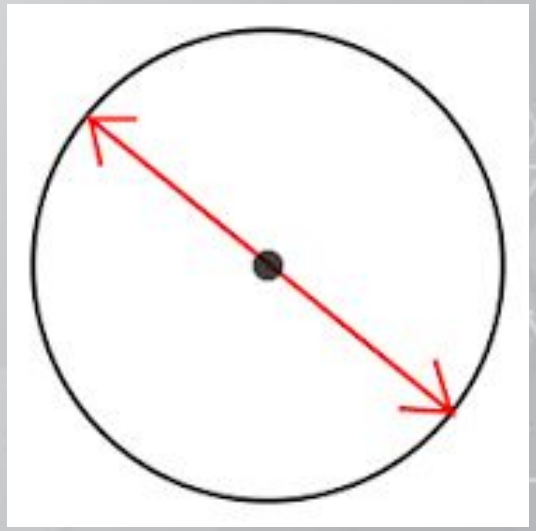


Diameter

Diameter

A diameter is a line segment that passes through the center of a circle and has both endpoints on the circumference.

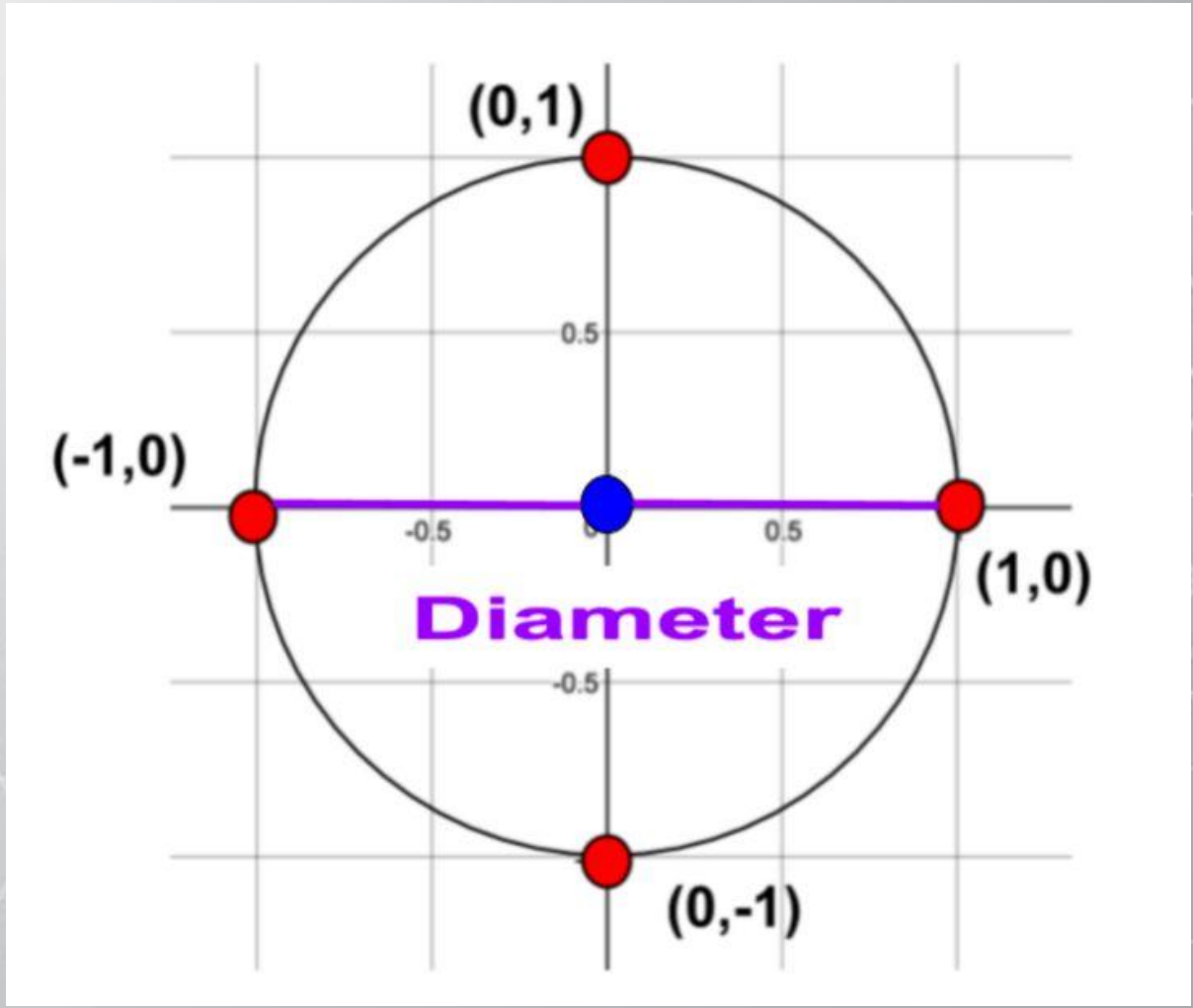
You can also think of a diameter as two radiuses that form a 180 degree angle inside the circle.

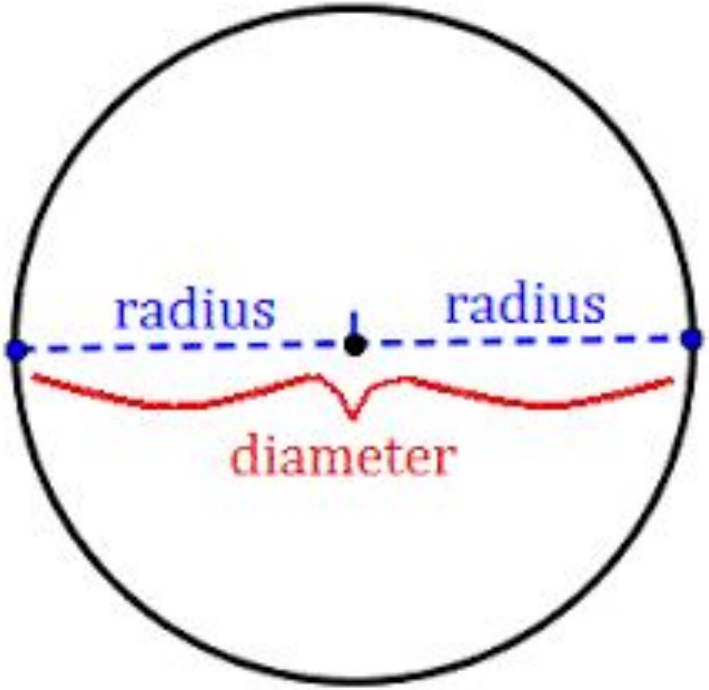


Congruent

All diameters of the same circle must have the same length.

The diameter is two radii





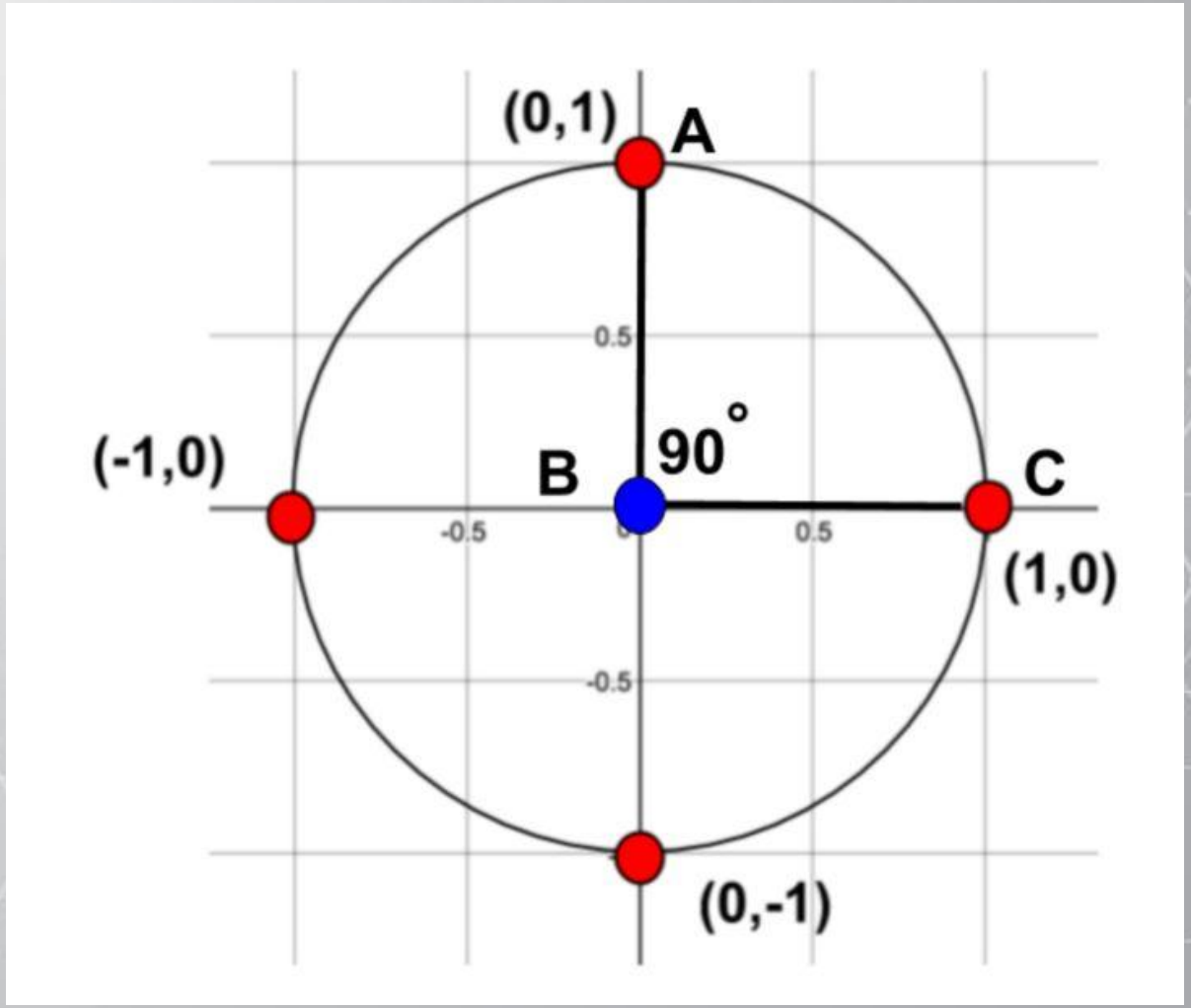
In any circle, the length of 2 radiuses is equal to the length of one diameter.

Arc

Arc

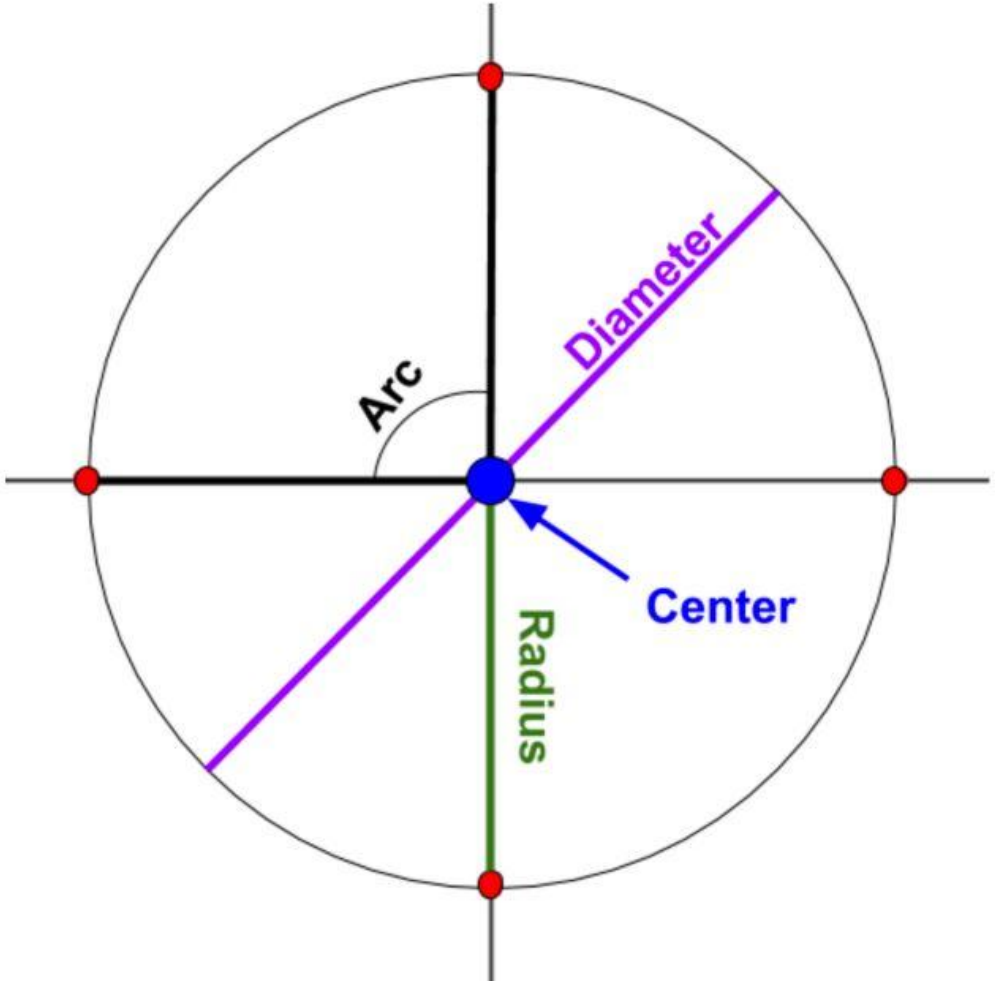
An arc is a part of the circumference of a circle or other curve

The are in this example is from point A to point C



Putting it Together

Putting these terms together, we have a fully labeled circle

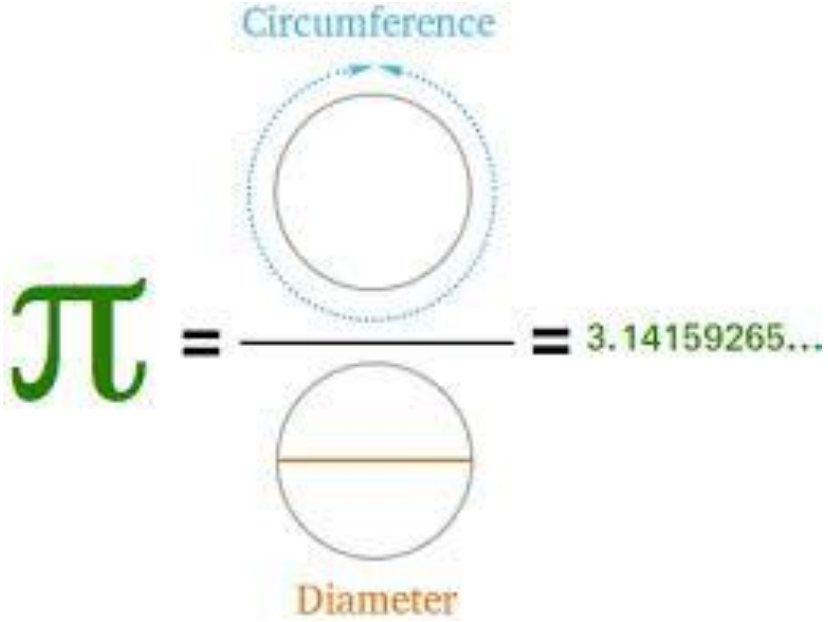


Pi

Pi has its very own symbol in math

Pi

Pi is the number of the circumference of any circle, divided by that circle's diameter.



Pi

Pie is the number of times the diameter of a circle will “fit” around its circumference.

The diameter of any circle will fit around its circumference 22/7 or 3.14 times.

The number Pi is an irrational number.

Some calculators have a π button

$$\pi = \frac{C}{d}$$

Pi Button

If you have a calculator with a pi (π) button you can use it to multiply the diameter of a circle to find its circumference

$C = D(\pi)$

You would just put the measure of the diameter in and hit the (π) button and boom - there would be the circumference.