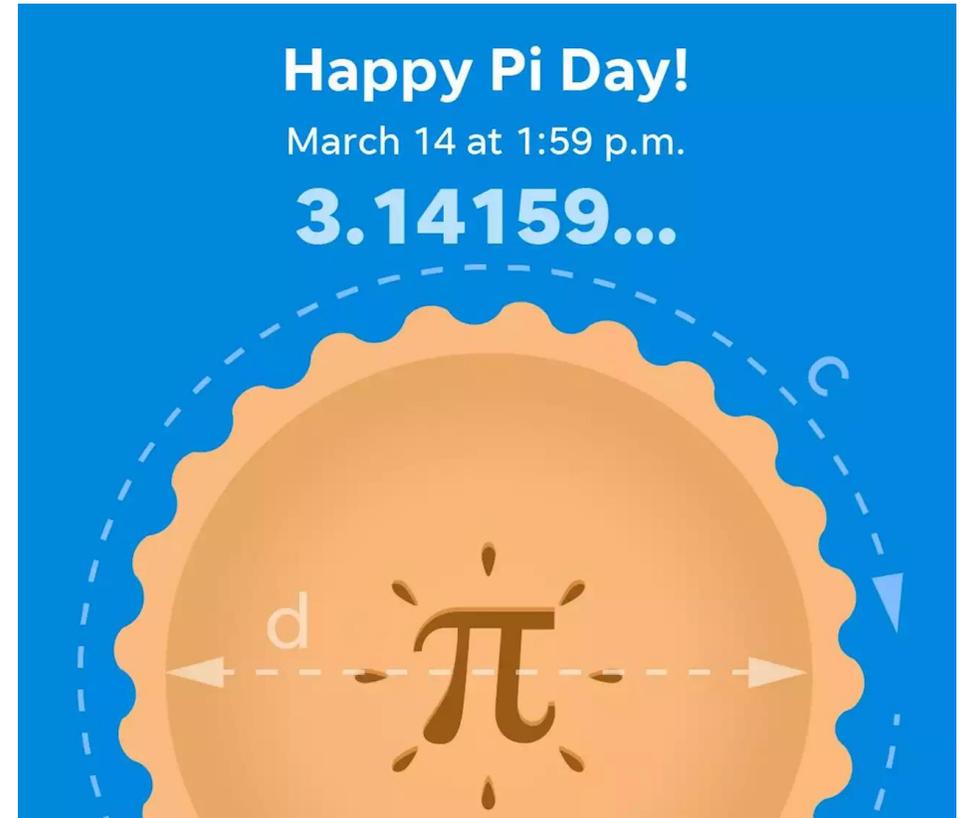


Today is a very special day in the Mathematics world!

Two celebrations are taking place today...



Mathematics Unites



3.14 = PI DAY

This morning we will begin to
celebrate Pi Day!

Then, during Period 4, you will be
doing some activities to celebrate
the International Day of
Mathematics!



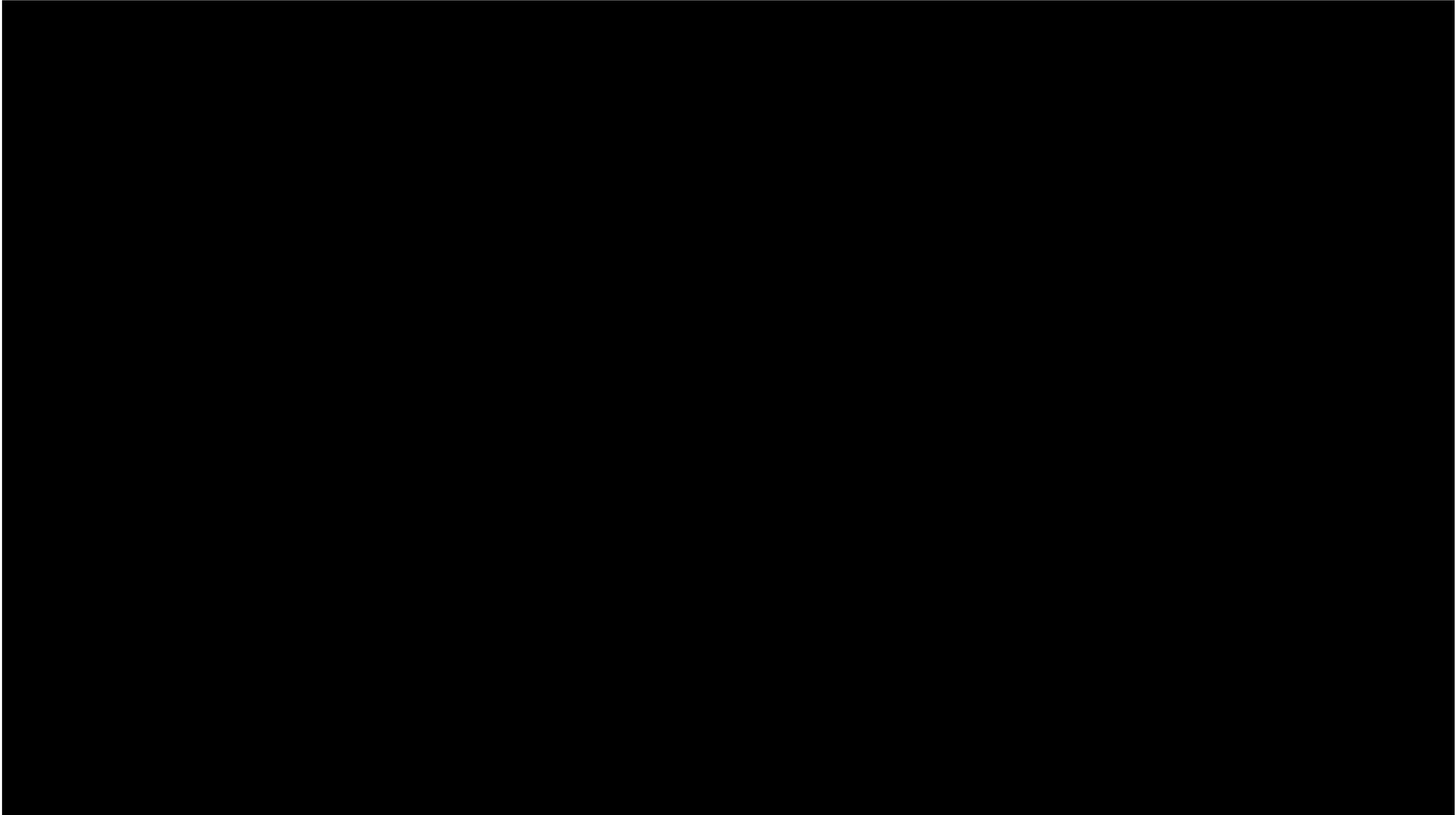


Your “at home” challenge...

Memorise as many digits of Pi as you can!

If you wish to take part in the Pi competition, see Miss Marshall in M23 at break time tomorrow (Tuesday 15th March) to see if you can hold the record for reciting the highest number of digits of Pi!

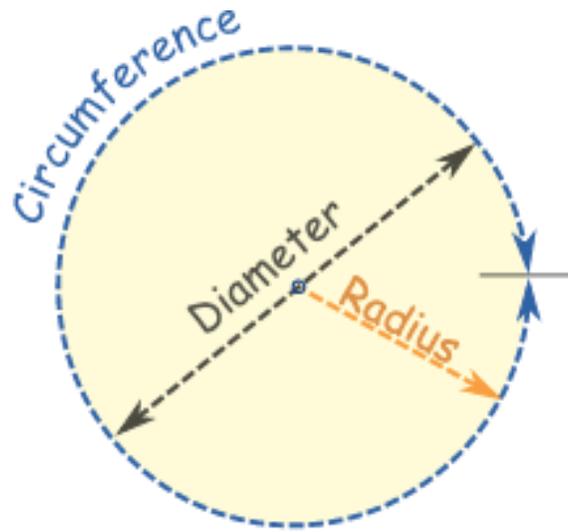
<https://www.youtube.com/watch?v=3HRkKznJoZA>



What is π ?

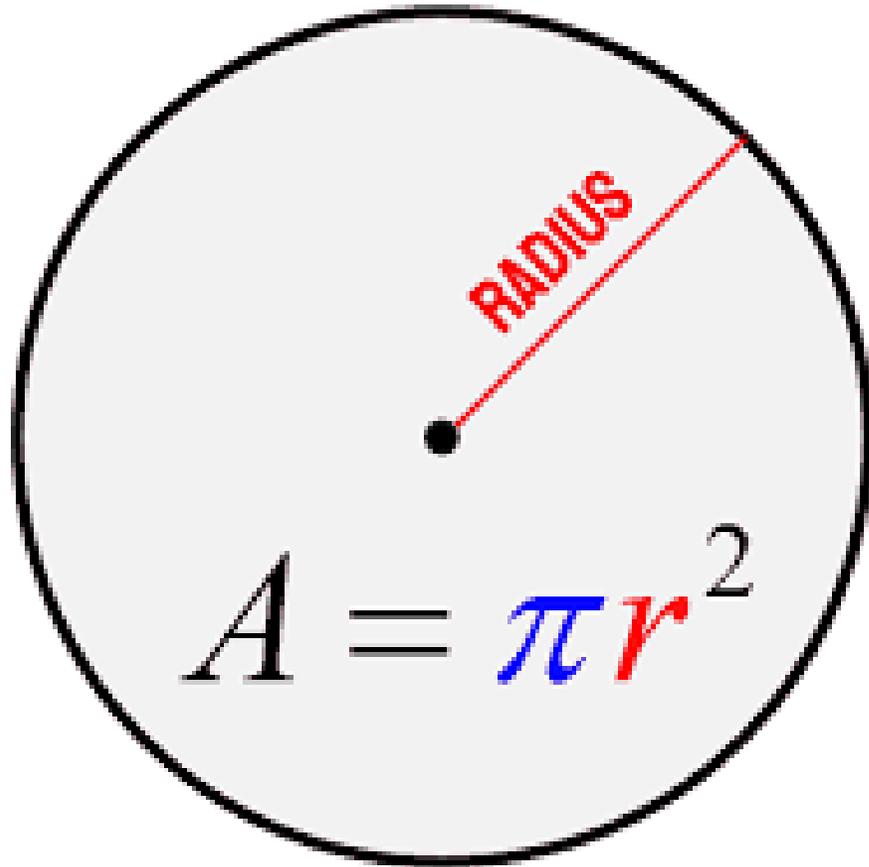
Pi (π) is the ratio of any circle's circumference to its diameter.

The value of this ratio is approximately 3.14 and, yes, this relationship applies to *any* circle big or small.



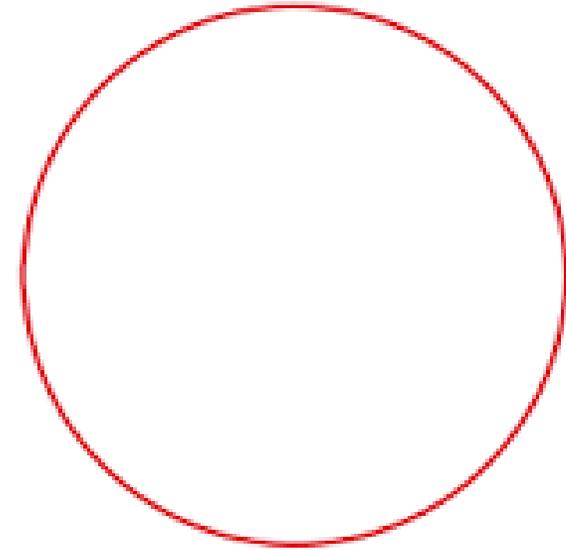
$$\frac{\text{Circumference}}{\text{Diameter}} = \pi = 3.14159\dots$$

Which key formulae do you know that have Pi in them? What do they help you to work out?



$$\pi \approx 3.1416$$

circumference



$$C = \pi d$$

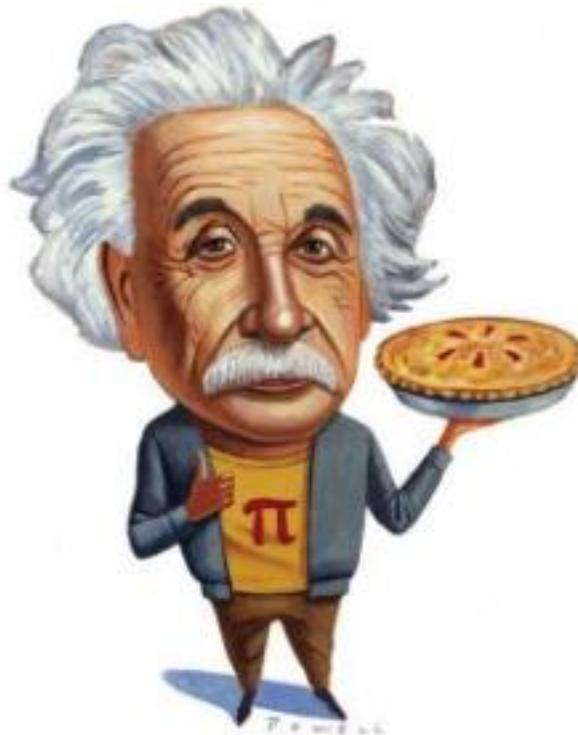
C - CIRCUMFERENCE

$\pi \approx 3.14$

d - DIAMETER

Pi Day Fun Facts

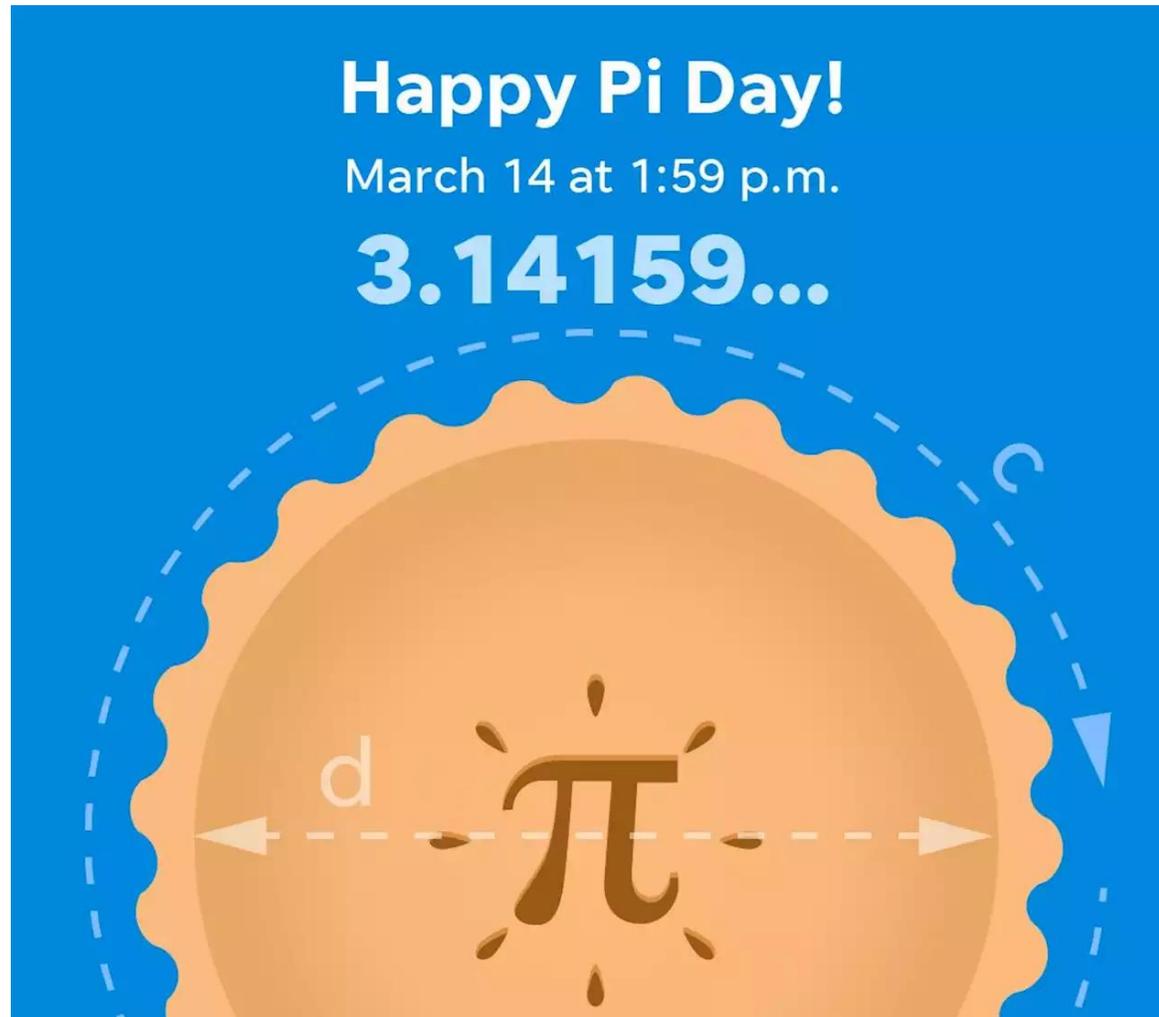
Famed mathematician and physicist Albert Einstein was, appropriately enough, born on Pi Day in 1879.



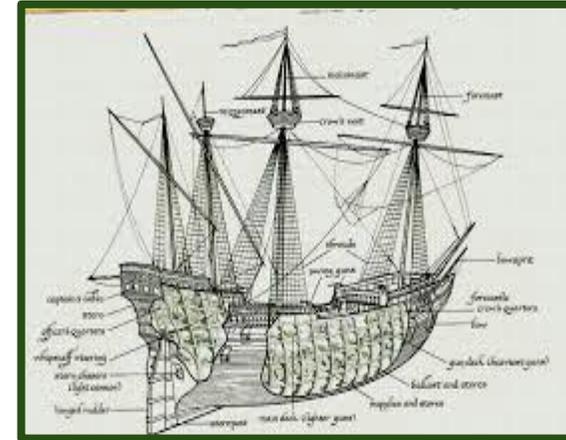
Pi Day was started in 1988 by physicist Larry Shaw at San Francisco's Exploratorium, where he was fondly known as the Prince of Pi.



The official Pi Day celebration time is 1:59 pm to make an appropriate 3.14159 when combined with the date.



In 1706 a little-known mathematician named William Jones first used a symbol π to represent Pi.



He worked on a man-of-war ship and worked out the navigation with mathematics.

The Guinness World Record for reciting the greatest number of Pi digits was achieved by Rajveer Meena at VIT University in Vellore, India in 2015.

He was able to recite an astonishing 70,000 decimal places of Pi.

To maintain the sanctity of the record, Rajveer even wore a blindfold throughout the duration of his recall, which took 10 hours.

Mathematicians estimate that it would take 133 years for a person to recite the 6.4 billion known digits of Pi without stopping!



If you hold a mirror to a circle, it looks like a circle. If you hold a mirror up to 3.14, it spells PIE!



Some people believe the ancient pyramids of Giza in Egypt were built on the principles of pi. Publisher and writer John Taylor first proposed this idea in 1859.

He found that dividing the perimeter of the pyramid of its base by its height produces a number that is close to 2π .



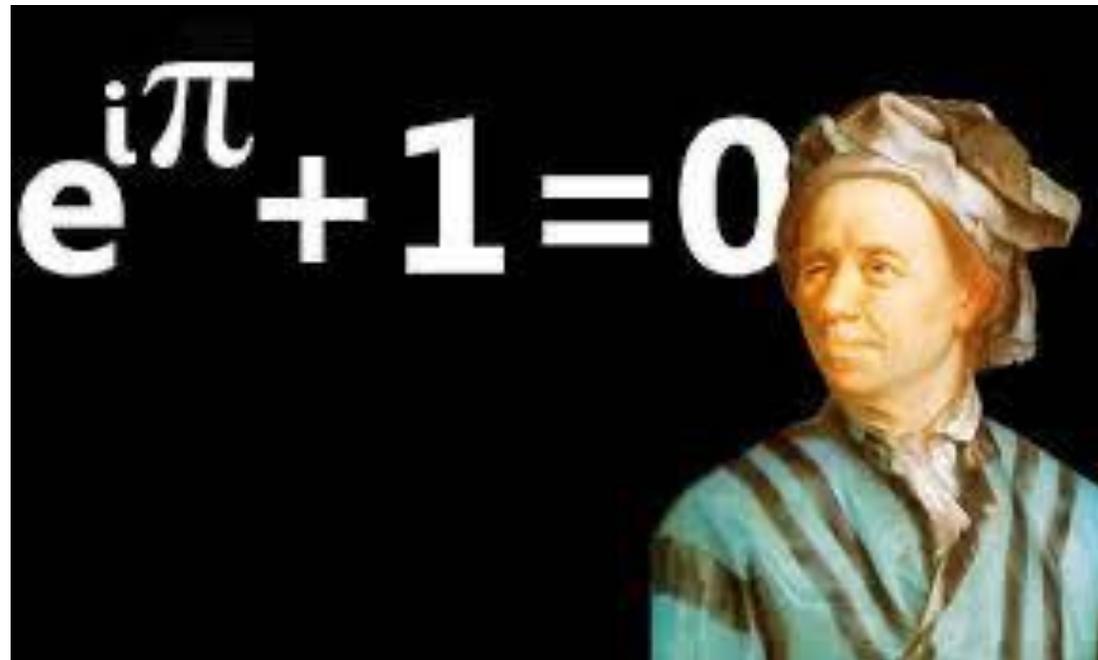
Pi has been known for over 4,000 years but it was the mathematician Archimedes of Syracuse who did one of the first calculations of pi.

He knew his calculations were not exact but he came up with the value of pi as between $3\frac{1}{7}$ and $3\frac{10}{71}$.

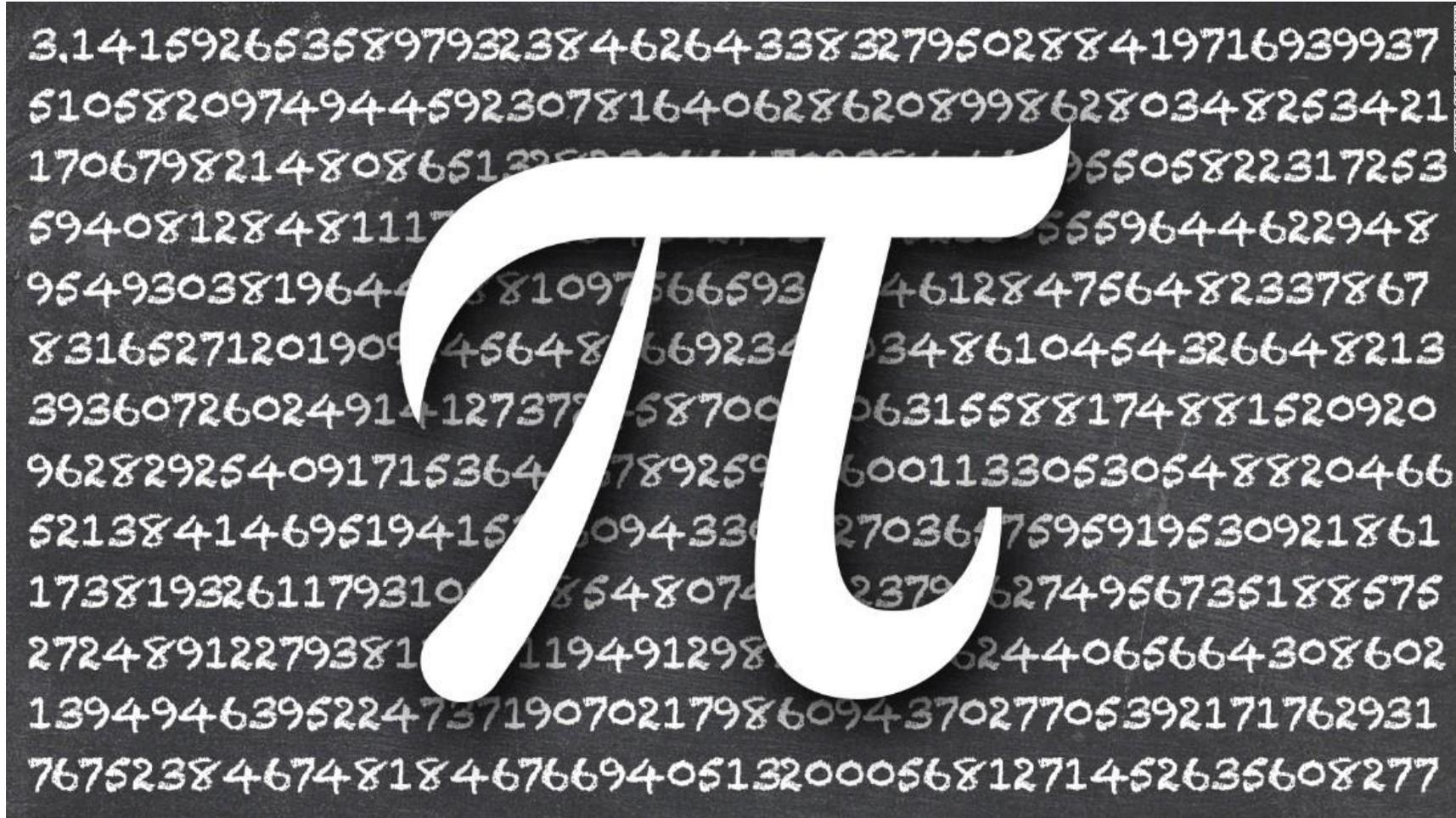


The π symbol that we use in maths to represent pi was first used by the Swiss mathematician, physicist, and astronomer Leonard Euler in the year 1737.

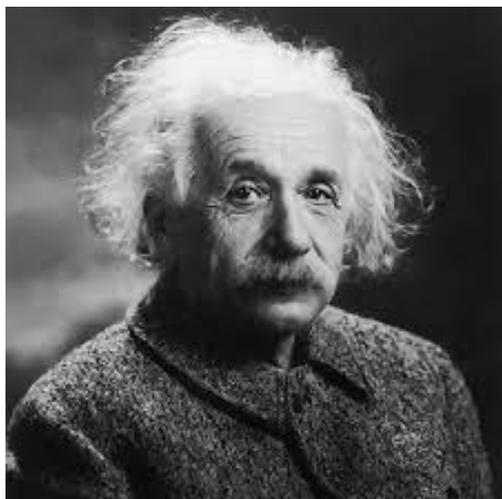
Before Euler popularised using the Greek symbol π to represent the ratio of a circle's circumference to its diameter, the value was known as Archimedes' constant.



The most common number in the first 100,000 decimal places of Pi is the number 1, which occurs over 10,000 times!

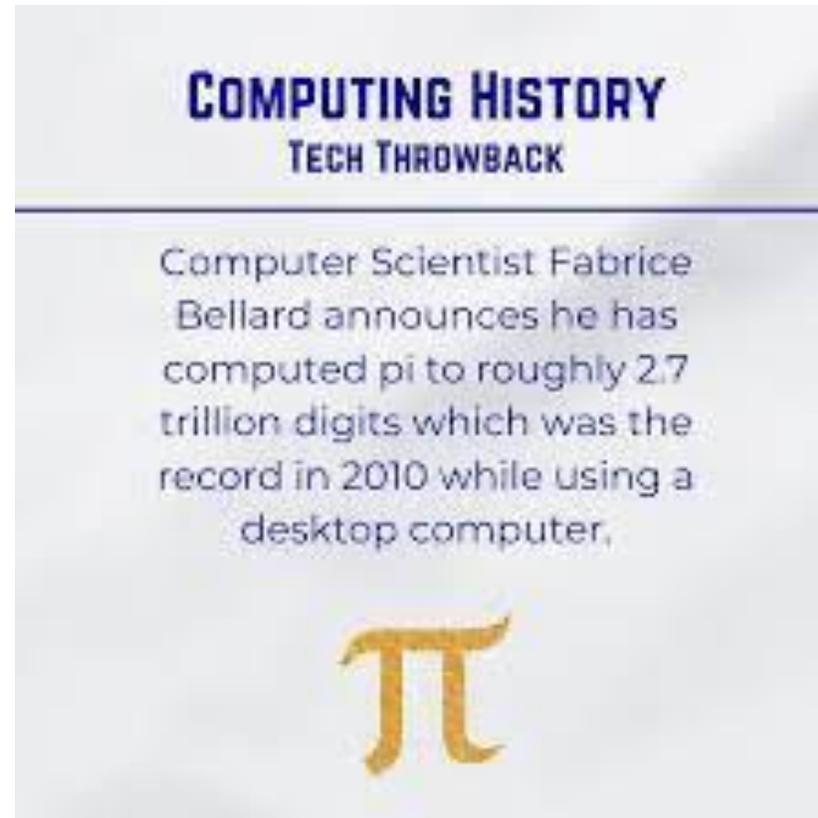


There are several famous people born on March 14th, Pi Day, including Albert Einstein, NBA All-Star Steph Curry, Actors Billy Crystal and Michael Caine, and Olympic Gold Medallist Simone Biles.



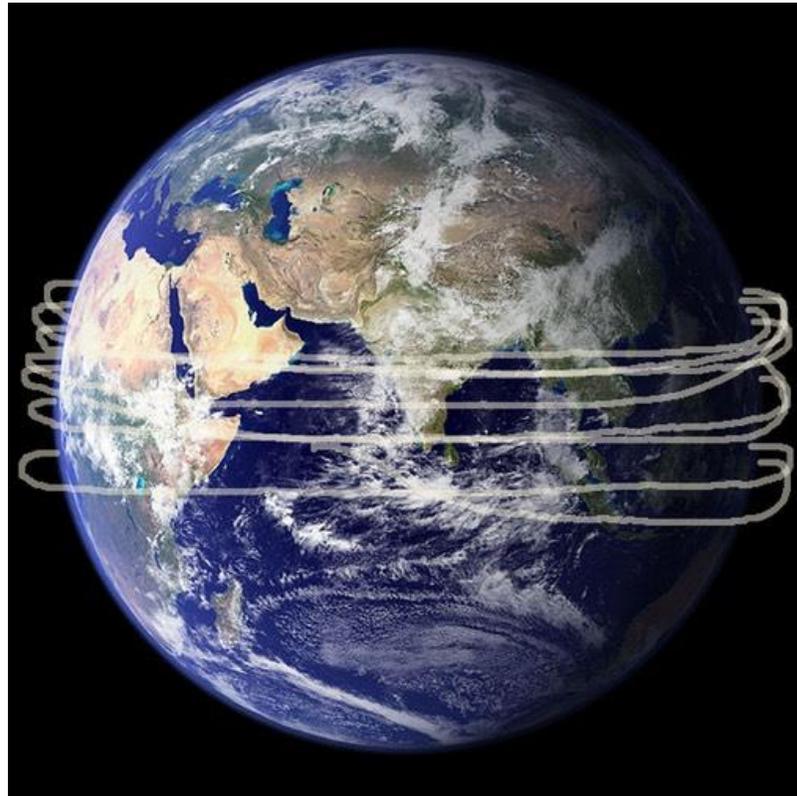
Mathematician and computer scientist Fabrice Bellard calculated 2.7 trillion decimal places of pi using just a typical desktop computer in 2010.

That's a lot of digits!

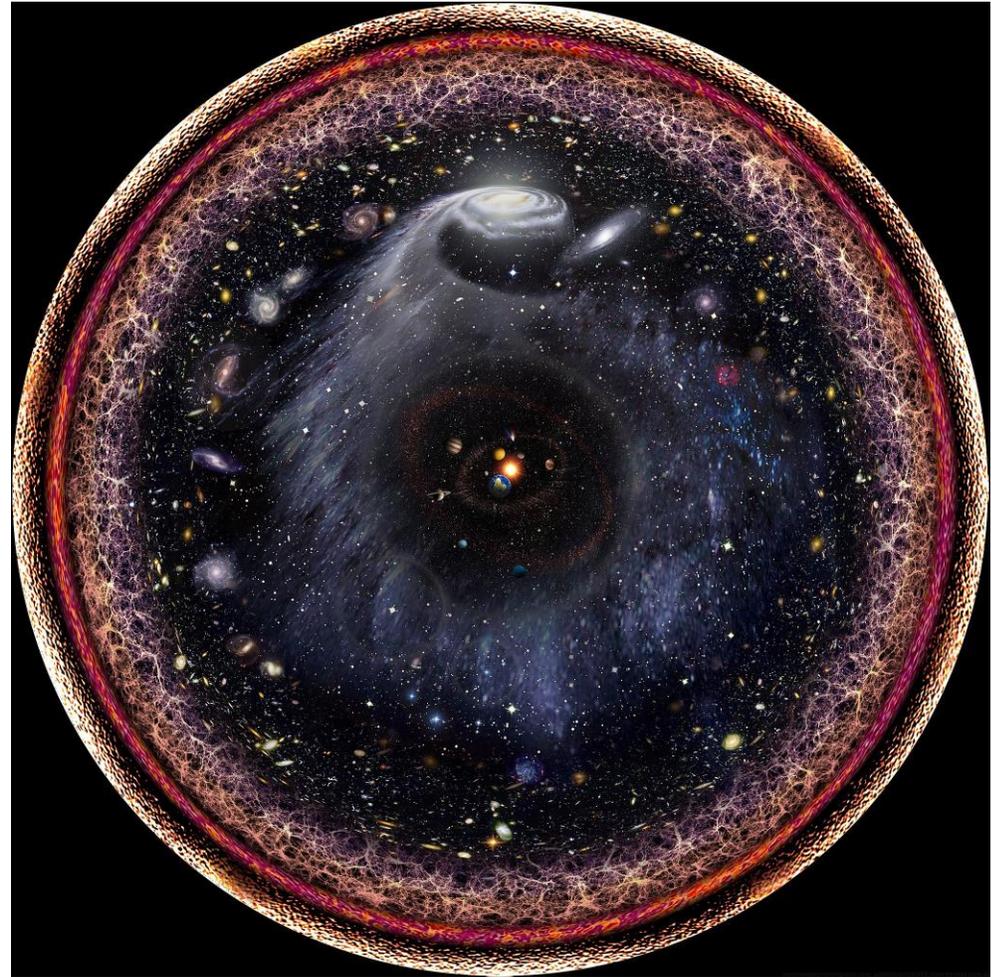


As mentioned earlier, Pi is an irrational number and is thus infinite.

Since pi goes on forever, it has enough digits to wrap around the entire world an infinite number of times!



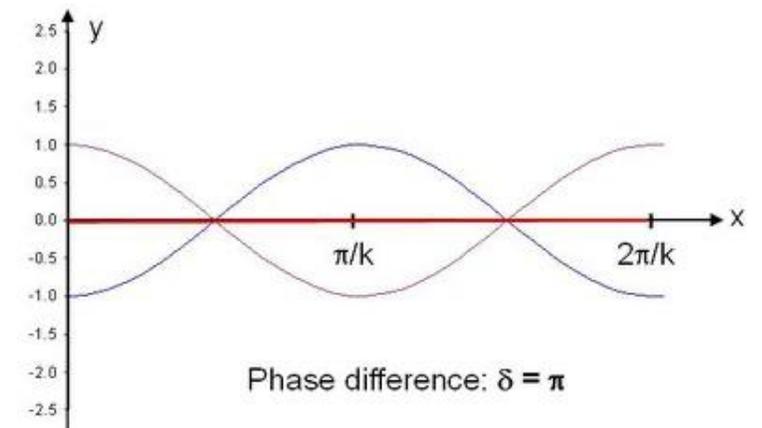
Pi can be used to measure circular natural events ranging from water ripples that emanate from a single point to finding the spherical volume of the entire universe (which can be done using only the first 39 digits of pi!)



A life without Pi – a life without circles...?

Imagine...

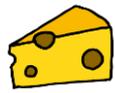
- if every wheel in the world was slightly different...
 - there were no rainbows...
- engineers couldn't calculate sound waves!



How will Pi shape your day today?

- What part of the school buildings have needed Pi for their construction?
- Look around at nature for anything that has a diameter and a circumference.
 - How many perfect circles can you see?
- To create a spring, you need Pi. What has a spring in it that you have used today?

Area and Circumference Song...
Yes, it's very cheesy!



<https://www.youtube.com/watch?v=IWDha0wqbcl>

