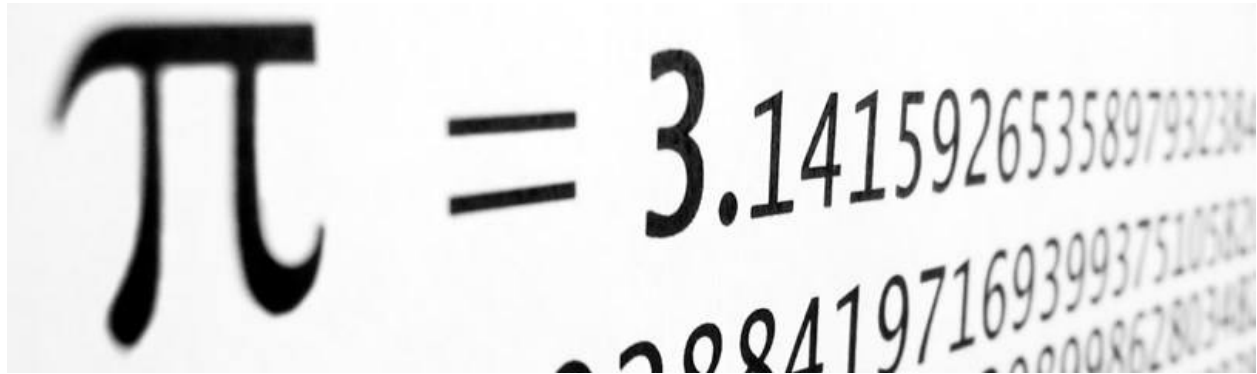


SCIENCE ESSAY



The Life of Pi

March 14 is fast approaching. We celebrate Pi Day on March 14 because the first three numbers in value of Pi are 3.14 and March 13 is 3-14.

“Pi” (π) is the ratio of a circle’s circumference to its diameter ($\pi=c/d$). “Pi” is a constant number, meaning that for all circles of any size, Pi will be the same. The diameter of a circle is the distance from edge to edge, measuring straight through the center. The circumference of a circle is the distance around.

The trouble is that everyone wants a piece of Pi. The Christians claim that in the Old Testament of the Bible, a circular pool is referred to as being 30 cubits around, and 10 cubits across which comes to 3 when you divide the circumference (30) by diameter (10).

The Egyptians, on the other hand, claim Pi as their own since the vertical height of the pyramid at Giza has the same relationship to the perimeter of its base as the radius of a circle has to its circumference.

The Indians claim that they were the first to invent the value of Pi. They claim that the

value of Pi was determined by them in 3000 BC (by the time Rigveda was written). They claim that the Rigveda mentions the perimeter of a pit is 3 times its diameter—therefore approximating the value of π at 3.

Well, the Chinese can’t be left behind. They claim that the value of Pi was first determined by Liu Hui, a mathematician of the Cao Wei Kingdom.

In modern times (AD), the mathematician Archimedes used polygons with many sides to approximate circles and determined that “Pi” was approximately $22/7$ (twenty-two divided by seven). The symbol (Greek letter “ π ”) was first used in 1706 by William Jones. The use of π really became popular after it was adopted by the Swiss mathematician Leonhard Euler in 1737.

Despite the claims, Pi is an extraordinary mathematical symbol. Here are some fascinating facts about π .

In recent years, with the help of Super Computers, “Pi” has been calculated to over one trillion digits past its decimal point. And as we all know, a “trillion” is a very large number, unless of course, we are

talking about the United States Federal Deficit, which is approaching twenty-two trillion (22,000,000,000,000) dollars!

Of course, only thirty-nine (39) digits past the decimal point are needed in order to accurately calculate the spherical volume of our entire universe, but because of Pi's infinite and pattern-less nature, it's a fun challenge to memorize, and to computationally calculate more and more digits.

We can never truly measure the circumference or the area of a circle because we can never truly know the value of pi. Pi is an irrational number, meaning its digits go on forever in a seemingly random sequence.

In 1995, Hiroyoki Gotu memorized 42,195 places of pi and is considered the current pi champion. Some scholars speculate that Japanese is better suited than other languages for memorizing sequences of numbers.

During the famed O.J. Simpson trial, there were arguments between defense attorney Robert Blasier and an FBI agent about the actual value of pi, seemingly to reveal flaws in the FBI agent's intellectual acumen.

Since there are 360 degrees in a circle and pi is intimately connected with the circle, some mathematicians were delighted to discover that the number 360 is at the 359th digit position of pi.

The first million decimal places of pi consist of 99,959 zeros, 99,758 1s, 100,026 2s, 100,229 3s, 100,230 4s, 100,359 5s, 99,548 6s, 99,800 7s, 99,985 8s, and 100,106 9s.

Comedian John Evans once quipped: "What do you get if you divide the circumference of a jack-o'-lantern by its diameter? Pumpkin π ."

So why should we care so much about pi? The beauty of pi, in part, is that it puts infinity within reach. Even young children get this. The digits of pi never end and never show a pattern. They go on forever, seemingly at random. This tension between order and randomness is one of the most tantalizing aspects of pi.

On Our Soapbox Moments!

By Vishwambhara Adiga

We all face moments where we have little time to react and end up either alleviating or making a situation even worse.

I have been having conversations with my 5-year old on how to handle criticism, bullying and other common circumstances of day to day life either in a school setting or outside. I noticed that she used to be upset over a little annoyances.

This evening she came to me after dinner, sat on my lap and slowly whispered, "Daddy my friend standing next to me in my Zumba class told me something not so very nice."

"Really? What was your response?" I asked her.

To my astonishment, she replied, "I told him that I am not going to talk back to you."

That amount of attention to details, self-awareness, self-control and situational leadership, I thought, she is already half way through the meditation journey!

It makes me proud and, at the same time, more aware about how I should react to a situation in front of her moving onwards.