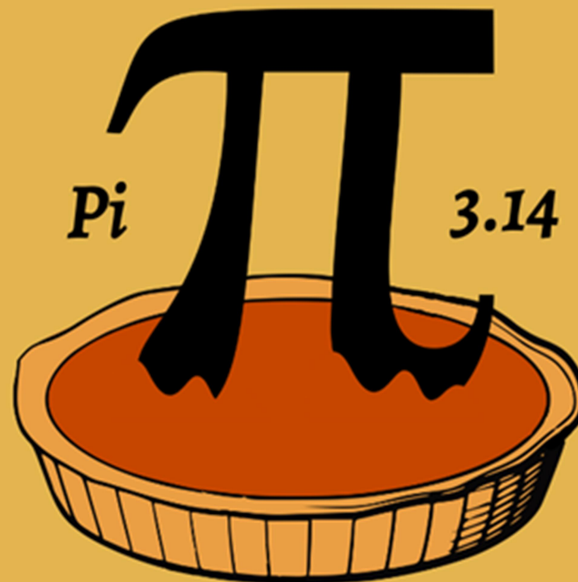


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PI DAY

A day celebrated by many Math enthusiasts!

3.14!

PI Day: March 14

Pi Day is celebrated on March 14th (3/14) around the world. Pi (Greek letter “ π ”) is the symbol used in mathematics to represent a constant — the ratio of the circumference of a circle to its diameter — which is approximately 3.14159. Pi Day is an annual opportunity for math enthusiasts to recite the infinite digits of Pi, talk to their friends about math, and eat pie.

Pi has been calculated to over 50 trillion digits beyond its decimal point. As an irrational and transcendental number, it will continue infinitely without repetition or pattern. While only a handful of digits are needed for typical calculations, pi’s infinite nature makes it a fun challenge to [memorize](#), and to computationally calculate more and more digits.

“Probably no symbol in mathematics has evoked as much mystery, romanticism, misconception and human interest as the number pi”

~William L. Schaaf, *Nature and History of Pi*

Pi (often represented by the lower-case Greek letter π), one of the most well-known mathematical constants, is the ratio of a circle’s circumference to its diameter. For any circle, the distance around the edge is a little more than three times the distance across.

Typing π into a calculator and pressing ENTER will yield the result 3.141592654, not because this value is exact, but because a calculator’s display is often limited to 10 digits. Pi is actually an irrational number (a decimal with no end and no repeating pattern) that is most often approximated with the decimal 3.14 or the fraction $\frac{22}{7}$.

(source: piday.org)

To know more about PI Day:

- Pi Day Celebrate Mathematics on March 14th.
<https://nineplanets.org/pi-day/>
- <https://www.piday.org/>
- Pi Day. (2023). In Wikipedia.
https://en.wikipedia.org/w/index.php?title=Pi_Day&oldid=1142135034

Some selected articles on Pi:

- Agarwal, R.P., Agarwal, H. & Sen, S.K. Birth, growth and computation of pi to ten trillion digits. *Adv Differ Equ* **2013**, 100 (2013).
<https://doi.org/10.1186/1687-1847-2013-100>
- Bartholomew, R. C. Let's Use Tau—It's Easier Than Pi. *Scientific American*.
<https://www.scientificamerican.com/article/let-s-use-tau-it-s-easier-than-pi/>
- Bogart, S. What Is Pi, and How Did It Originate? *Scientific American*.
<https://www.scientificamerican.com/article/what-is-pi-and-how-did-it-originate/>
- Chapman, J. M. B. and S. T., & Chapman, S. T. (2015). I Prefer Pi: A Brief History and Anthology of Articles in the *American Mathematical Monthly*. *The American Mathematical Monthly*, 122(3), 195–216.
<https://www.jstor.org/stable/10.4169/amer.math.monthly.122.03.195>
- Crans, A. S. Math Is More Than Just Numbers: Celebrate Pi Day a Different Way. *Scientific American*. <https://www.scientificamerican.com/article/math-is-more-than-just-numbers-celebrate-pi-day-a-different-way1/>
- David Wilson.(2000). The History of Pi. *History of Mathematics*, Rutgers, Spring.
<https://sites.math.rutgers.edu/~cherlin/History/Papers2000/wilson.html>
- Dhingra, K. On Pi Day, Let's Disrupt Our Narrow Notions of STEM. *Scientific American Blog Network*. <https://blogs.scientificamerican.com/observations/on-pi-day-lets-disrupt-our-narrow-notions-of-stem/>
- Easy as Pi? Infinitely Not! (2013). *Mathematics Teaching in the Middle School*, 18(7), 402–404. <https://www.jstor.org/stable/10.5951/mathteacmidscho.18.7.0402>
- Explained: How Indian Mathematicians Calculated The Value Of Pi
https://www.youtube.com/watch?v=zKIKzau_bsE&t=11s
- Lamb, E. The Hottest New Pi's to Celebrate for Pi Day. *Scientific American Blog*
<https://blogs.scientificamerican.com/roots-of-unity/the-hottest-new-pis-to-celebratefor-pi-day/>
- Perry, C., Cyrus, V., Johnson, G., & Dogbey, J. (2010). Mathematical explorations: Understanding the Value of Pi. *Mathematics Teaching in the Middle School*, 16(3), 180–186. <https://www.jstor.org/stable/41183503>
- Santucci, L. C. (2011). Recreating History with Archimedes and Pi. *The Mathematics Teacher*, 105(4), 298–303.
<https://www.jstor.org/stable/pdf/10.5951/mathteacher.105.4.0298.pdf>

Selected videos on π :

- The Evolution of π in Ancient India || Project SHIVOHAM
https://www.youtube.com/watch?v=2_ZZMHB3Vvc
- Computing π - The Indian Method
https://www.youtube.com/watch?v=zKIKzau_bsE
- Prof. K. Ramasubramanian : "The Golden Age of Indian Mathematics"
https://www.youtube.com/watch?v=lcVRWts_IZQ
- The Discovery that Changed Mathematics | Understanding the Concept of Madhava Series for π
<https://www.youtube.com/watch?v=0hQvqq7DWRA>
- The History of π | Pi Day Special
<https://www.youtube.com/watch?v=m1e-YGt09RU>
- History of Indian Mathematics – Madhava – 1
<https://www.youtube.com/watch?v=lseuvda15t8>
- History of Indian Mathematics – Madhava – 2
<https://www.youtube.com/watch?v=h0dR16uuVAq>
- Veritasium (Director). (2021, March 16). The Discovery That Transformed Pi.
<https://www.youtube.com/watch?v=gMlf1ELvRzc>
- Shoo Rayner Drawing (Director). (2020, May 18). How Pi was discovered by a genius— This is astounding!
<https://www.youtube.com/watch?v=PFf9d7U2tVA>
- TED-Ed (Director). (2013, July 10). The infinite life of Pi—Reynaldo Lopes.
<https://www.youtube.com/watch?v=9a5vHXsUvUw>

Madhava's Series

$$\frac{\pi}{4} = \sum_{n=0}^{\infty} \frac{(-1)^n}{2n+1}$$

Madhava was in 14th Century,

Some other interesting resources on PI:

- Berggren, L. (2000). Pi: A Source Book. Springer EBooks. https://www.academia.edu/119780797/Pi_A_Source_Book
- Irrational Numbers Search Engine. <http://pisearch.org/pi/>
- Pi. <http://www.math.com/tables/constants/pi.htm>
- Weisstein, E. W. Pi [Text]. Wolfram Research, Inc. <https://mathworld.wolfram.com/>

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