UC SANTA BARBARA

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Happy Pi Day

Circles abound in the natural world and throughout the universe. The mathematical constant 3.14159 — or pi — can be used to calculate the area of any circle, regardless of size. The ratio of a circle's circumference to its diameter, pi touches almost all aspects of math and science, from creating safe architecture to discovering exoplanets in distant solar systems.

Ancient civilizations had pi figured out, but it wasn't until the early 18^{th} century that the Greek letter (π) we all recognize became its chosen symbol. In recent years, pi has been calculated to more than one trillion digits past its decimal. As an irrational and transcendental number, it will continue infinitely without repetition or pattern.

Yet only 39 digits past the decimal are needed to accurately calculate the spherical volume of our entire universe. American astronomer Carl Sagan even made the suggestion that within the numbers of pi, the creator of the universe left a secret message.

In celebration of Pi Day, March 14 (3.14), UC Santa Barbara mathematician Katy Craig offers a more down-to-earth understanding of pi and its significance.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary

collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.