

Learning About Pi



The word “pi” doesn’t refer to something grandma bakes in the oven with apples, although we usually pronounce it the same way. No, pi is a number. It’s a particular number that has great importance in math, science and engineering. Which number?

3.1415926535897932...

You notice the three dots at the end there? Well, pi actually goes on forever without repeating itself.

That’s right, forever. For that reason we call it an “irrational number.” So don’t try to argue with it. You probably won’t need to know 16 digits like you see there. Most people just remember 3.14159, or even more simply, 3.14.

That’s why “Pi Day” is celebrated on March 14th. Third month, fourteenth day. Pi Day can be a whole lot of fun and there are hundreds of different activities you can do to celebrate this amazing number.

Calculating pi

So what exactly is pi? It’s the ratio of the circumference of a circle to its diameter. Huh? OK, here it is more simply: if a circle is one inch across the middle, then it is 3.14 inches around the outside. And it doesn’t matter how big the circle is, that ratio will stay the same.

“Pi” is actually a letter in the Greek alphabet. In Greek, that letter is written like this: π . It’s the equivalent of the English letter “P.” We now use that symbol for pi in mathematics. The reason we use the letter “pi” is that it’s the first letter in the Greek word for perimeter. You see, perimeter basically means circumference.

History of pi

We only started saying pi and using that funny letter in the 18th century, but people have known about the idea of pi for a long long time. The ancient Babylonians and Egyptians knew that this kind of constant number existed, although their calculations were a bit off. Archimedes of Syracuse (not the University but the place in ancient Greece) discovered pi in the third century BC and Zu Changzhi did the same in the 5th century AD, without knowing about Archimedes work.

Digits of pi

We mentioned that pi goes on forever without repeating itself, but people have always been interested in learning as many digits as possible. With computers this has become easier. In 2002 a professor at the University of Tokyo calculated pi to 1.24 trillion digits. And there have always been people who've tried memorizing as much of pi as possible. The current world record was set in 2005, when Lu Chao of China recited pi correctly to 67890 digits. It took him over 24 hours to say it!