Happy "Pi Day"

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March is a month we look forward to seeing on the calendar each year. During the cold days of January and February, the coming of March signals the greatly anticipated arrival of spring. There are also historically memorable days such as the "Ides of March" on the fifteenth, and some days to kick back and celebrate such as "St. Patrick's Day" on the seventeenth. For the superstitious, this year, we even have a "Friday the Thirteenth".

One day that seems to be gaining popularity among the math-types of the world is March 14. When written numerically, 3-14 takes on the appearance of one of the most important of all mathematical constants, "Pi". Quite naturally, March 14th has been dubbed "Pi Day". Of course, Pi, represented by the Greek letter π, is the number that expresses the relationship between the diameter of a circle and its circumference. In addition, multiplying Pi by the radius squared gives us the area of a circle.

2015 is particularly significant for those observing "Pi Day. It will be 3-14-15, which is Pi to four decimal places. For anyone who wants to really get in the spirit of things, we can extend this and go to 9:26 am. Waiting another 53.5 seconds will provide the ultimate "Pi Day" thrill for those of us who don't get out much. Writing the date and time at this precise moment gives us: 3-14-15 9:26:53.5 which just happens to be the value of Pi to an amazing ten decimal places. This is certainly a once-in-a-lifetime event that will not happen again for another hundred years.

While on the subject of Pi, the famed Greek mathematician Archimedes is generally credited with defining its numerical value in 250 BCE (before the common era). There is evidence that knowledge of the relationship of the diameter of a circle to its diameter existed in Egypt over four thousand years ago. There are even biblical references which describe circular pools whose circumference was three times their diameter, which is a good approximation of Pi.

The value of Pi is shown here to twenty-five decimal places. If this is not sufficient for your needs, there are Internet websites which report it to one million decimal places! Looking at Pi, one thing that becomes evident is that none of its digits repeat with any pattern. It cannot be written as a common fraction like one-half or one-quarter. The closest approximation for Pi as number with a common fraction component is three and one-seventh, or 22/7. For this reason, Pi is considered to be an irrational number.

Personally, I use only five decimal places in any of my calculations. 3.14159 is more than adequate for any of the applications most of us will ever encounter – even 3.14 would be good enough. However, there are some people who are so fascinated by this

irrational number that they have taken on the correspondingly irrational challenge of memorizing Pi to as many decimal places as possible. It's almost unbelievable that there are those among us who can recite Pi to literally thousands of decimal places.

Saturday morning, March 14, 2015, I will put on my Pi tie and wear it for the day. The large π symbol displayed prominently on a background of its numerical value shown repeatedly to fifty decimal places will serve as a reminder of the importance of Pi in our everyday lives. Unfortunately, it may also show just how exciting my life really is.

Happy Pi Day, Everyone.

$$\pi = 3.1415926535897932384626433$$

The value of Pi to twenty-five decimal places