PI MAY BE COMPUTED TO 100-BILLIONTH PLACE; 1995, Toronto Globe and Mail
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Peter Borwein, a mathematician at **Simon** Fraser University, has devised a way to calculate the value of pi to 100 billion places on a home computer.
That is, if you have the time.

"I predict some smart kid working on a home computer will use these methods to compute the 100-billionth digit of pi in the very near future," Borwein said.
Pi, as you may remember, is the Greek letter designation of a never-ending number that is produced when the circumference of a circle is divided by its diameter.
Rounded off to 10 places it's 3.141592654, but mathematicians have continually stretched the actual number. The record so far is 4,294,967,286 places.
In a new vein, what Borwein and two colleagues - **Simon Plouffe** of the university and David Bailey of the National Aeronautics and Space Administration - have been able to do is come up with an algorithm that allows them to arrive at a final number for pi, even when they have not computed all the numbers in between.
For example, they know that pi to the 40-billionth place ends in the number 1. "We don't know or see what's in between," Borwein said.
While it took the trio a day's operating time on a large computer to arrive at the 40-billionth integer, Borwein believes that, by following some mathematical shortcuts the group has developed, all a mathematically inclined nonprofessional would need is an off-the-shelf personal computer to calculate a final number for pi that stretched into the billions.
Borwein has published a guide on how to use the group's new pi-searching techniques on his Internet World Wide Web page.
What's the use of pushing pi toward infinity? The computation of pi and other large numbers regularly is used by computer companies to test whether flaws have crept into calculating capacities.
"I can't think of a single one of our large calculations which hasn't discovered some bug in the computer's hardware or software," he said.

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