Celebrating the mathematical genius Ramanujan

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On December 22, 1887, Srinivasa Ramanujan was born to a poor family in the state of Tamil Nadu in South India. From humble and obscure beginnings, he blossomed into one of the greatest mathematical geniuses of all time. Largely self-taught and cut off from much of the current mathematical work of his time, he nevertheless produced observations and results that continue to dazzle.

This year, the world is celebrating the 125th anniversary of the birth of Ramanujan. To mark this occasion, the *NOTICES OF THE AMS* is publishing "Srinivasa Ramanujan: Going Strong at 125", a collection of articles by top experts that discuss Ramanujan's legacy and its impact on current mathematics. The articles will appear in two installments, the first in the December 2012 issue of the Notices (to be posted online on November 13, 2012), and the second in the January 2013 issue (to be posted online on December 6, 2012). The Notices is freely available without subscription at http://www.ams.org/notices.

Ramanujan had an intimate familiarity with numbers that seems to have stemmed from his awe-inspiring ability to calculate with them. This ability gave him a profound understanding of numbers and their relationships. The famous story about the "taxicab number" exemplifies this familiarity. At the invitation of the mathematician G.H. Hardy, Ramanujan visited Cambridge, England, in 1914 and lived there for several years. Once when Hardy traveled by taxicab to pay a visit to Ramanujan, he remarked that the cab had had a very dull number, 1729. "No", Hardy recalled Ramanujan as replying, "it is a very interesting

number; it is the smallest number expressible as the sum of two cubes in two different ways."

Ramanujan's contributions to mathematics were cut short by his untimely death in 1920, when he was just 32. He left behind several notebooks in which he recorded his findings, and these have been a wellspring of mathematical activity. Several world-class mathematicians have devoted much of their careers to understanding the material in the notebooks. As a result, Ramanujan's impact in mathematics has continued to grow over the years.

Today an annual conference on Ramanujan's work is held in his hometown, and three prizes and a research journal are named after him. His personality and achievements have captured the imagination of the general public. The definitive biography of Ramanujan, "The Man Who Knew Infinity", by Robert Kanigel, appeared in 1991, and a novelized treatment of his relationship with Hardy, "The Indian Clerk" by David Leavitt, was published in 2007. Movies and plays have also appeared, including a documentary called "Letters from an Indian Clerk", produced for the Equinox science series in 1987; the documentary was recently posted on Youtube:

More information: The collection of articles, "Srinivasa Ramanujan: Going Strong at 125", is edited by Krishnaswami Alladi (University of Florida) and contains contributions by Alladi, George Andrews (Penn State), Bruce Berndt (University of Illinois), Jonathan Borwein (University of Newcastle, Australia), Ken Ono (Emory University), K. Soundararajan (Stanford), R. C. Vaughan (Penn State), and S. Ole Warnaar (University of Queensland).