Srinivasa ramanujan

Science, Mathematics

Srinivasa Ramanujan Ramanujan was born in India to a poorfamilyin Erode, a city in Madras state. His father was a clerk and his mother a deeply religious housewife. None of these facts reflect who Ramanujan really was. He was a brilliant, self-taught mathematician whose ideas caught the attention of some of the prolific mathematicians of his time to include G. H. Hardy. In this short biography we will cover both his life and his contributions tomathematics. As stated earlier, he was born in south India to a poor family but they were still respectable in the community.

This gave Ramanujan the opportunity to attend school and begin learning elementary Mathematics. He was quickly realized as a truly brilliant student with most of his talent directed towards mathematics. Interestingly, his family would sometimes take in student boarders and one of them gave him a trigonometry text when he was twelve and he mastered it within a year. In 1903 he was awarded ascholarshipto attend the Government College at Kumbakonam. He spent all of his time studying mathematics and ended up failing his other subjects and lost his scholarship and dropped out.

He married Janaki in 1909 and acquired a job as a clerk. While the position did not pay much it allowed him much time to concentrate on his research. Ramanujan went to Cambridge in 1914, despite the great strides he made in his work in corroboration Hardy and Littlewood it took a great toll on his body. Ramanujan, being devout to his religion did not eat meat and the lack of quality vegetarianfoodin England and his long working hours were hard on his body. In 1917, Ramanujan was hospitalized with what was thought to be tuberculosis.

While continually working from his hospital bed, he did not show enough improvement to make the trip back to India until 1919. Even with the best medical care available in India, Ramanujan died on April 29, 1920 at the age of 32. Ramanujan’s genius in mathematics is still represented today. His impact on Number Theories, Modular Forms, Statistical Mechanics, and other branches of mathematics have made great contributions not only in math but also in physics and computerscience. Ramanujan’s style and methods of mathematics developed from his earlier studies in trigonometry and Carr’s volume of theorems.

In his own works, Ramanujan looked for such formulas or identities that he saw in Carr’s works. In his earlier work, when he found a formula or answer he felt to be true by his own mathematical intuition and therefore he provided few proofs for his results. In his works with Hardy, they made great progress in the theory of partitions. “ The partition function p(n); is the function of a positive integer n which is a representation of n as a sum of strictly positive integers. Thus p(1)= 1, p(2)= 2, p(3)= 3, p(4)= 5 , p(5)= 7, p(6)= 11. (Denbath 628) In some of his last work before his death, Ramanujan discovered what is now known as the Mock Theta Functions. Mock functions are q series with exponential singularities such that the arguments terminate for some power. Srinivasa Ramanujan was a man dedicated to mathematics and had a true love for it. He was also a man entrenched in his religion and a deep commitment to his family. He consistently wanted to improve theeducationin his community and showed much interest in the poor and orphans who needed help getting an education.

With all of the accomplishments and accolades that are attached to his name the truth of who Ramanujan was as a mathematician and a person makes him truly a one of a kind person in history. Works Cited Watkins, Thayer. “ Srinivasa Ramanujan, a Mathematician Beyond Compare. ” San Jose University, n. d. Web. 19 November 2012. Debnath, Lokenath. “ Srinivasa Ramanujan (1887-1920) and the Theory of Partitiions of Numbers and Statistical Mechanics a Centennial Tribute. ” J. Math. & Math & Sci. Vol. 10 No. 4 (1987): 625-640. Web. 19 November 2012.