



LARGER THAN
LIFE
A CELEBRATION OF GREATNESS

Ramanujan

1887 - 1920

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INTRODUCTION

Srinivasa Ramanujan Iyengar was an **Indian mathematician who is widely regarded as one of the greatest mathematical minds in recent history**. With almost no formal training in pure mathematics, he made substantial **contributions in the areas of mathematical analysis, number theory, infinite series and continued fractions**.

BIRTH AND EARLY LIFE

Ramanujan was born on **22 December 1887 in Erode**, Tamil Nadu, India. His father worked in Kumbakonam as a clerk in a cloth merchant's shop. When he was nearly five years old, Ramanujan entered the primary school in Kumbakonam although he would attend several different primary schools before entering the Town High School in Kumbakonam in January 1898. At the Town High School, Ramanujan was to do well in all his school subjects and showed himself an able all round scholar.

CHRONOLOGY

1900: He began to work on his own on mathematics summing geometric and arithmetic series.

1904: He **investigated $(1/n)$. He calculated Euler's constant to 15 decimal places and began to study Bernoulli numbers**. He was awarded a scholarship to the government college in Kumbakonam.

1905: The scholarship was not renewed as Ramanujan was focussed so much on maths, his other subjects suffered heavily. He ran away to Vizagapatnam (650km north of Madras) where he studied hyper geometric series and elliptic functions.

1906: He **studied at Pachaiyappa's College in Madras** with the aim of attaining a place at the University of Madras. However, he became ill and failed all his exams with the exception of Mathematics.

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1908: He **studied fractions and divergent series** despite becoming seriously ill.

1910: He **developed relations between elliptic modular equations**.

1911: Ramanujan's paper on Bernoulli numbers was published in the **Journal of the Indian Mathematical Society**. He Began work in the Accountant's General Office in Madras, but was still unable to obtain a university scholarship.

1912: He began to work as a clerk in the Madras Port Trust with a number of trained mathematicians.

1913: It was the first instance of correspondence between Ramanujan and G H Hardy of Cambridge containing Ramanujan's findings on the Riemann series, elliptic integrals and the zeta function. Ramanujan was **awarded a two-year scholarship at the University of Madras**.

1914: Hardy brought Ramanujan to England, but initial collaboration was difficult due to Ramanujan's lack of formal mathematical training and strict Brahmin beliefs.

1915: He published a limited amount of research due to further illness.

1916: He **graduated from Cambridge** with a Bachelor of Science by Research.

1918: He was elected a fellow of the Cambridge Philosophical Society, a fellow of the Royal Society and a Fellow of Trinity College, Cambridge.

1919: He sailed **back to India**.

1920: He **died in Kumbakonam on 26 April 1920**.