



মণিপুরৰ শাসনৰত্ন (মণি)

DEPARTMENT OF EDUCATION (S)  
Government of Manipur

**CLASS X**  
**ENGLISH COURSE BOOK**  
**UNIT IV – PERSONALITIES**  
**LESSON 9**  
**THE MAN WHO KNEW INFINITY**

**SOLUTIONS**

**A. Based on your reading of the text, complete the following statements:**

- i. **Hardy** realized the genius in **Ramanujan** and his stamp of approval improved Ramanujan's status immediately.
- ii. Professors H.F. Baker and E.W. Hobson had returned Ramanujan's papers without comment.
- iii. After passing the primary examination in 1897, Ramanujan entered Town Higher Secondary where he learnt formal mathematics for the first time.
- iv. After failing the college, Ramanujan left college and pursued his independent research in Mathematics.
- v. Ramanujan feared that he might die and so he handed over his mathematical notebooks to one of his trusted friends so that it might not be lost.
- vi. Ramaswamy Aiyer said that he had no mind to smother Ramanujan's genius by an appointment in the lowest range of the revenue department.
- vii. Ramanujan refused to go to England because his mother did not permit him to go.

**B. Answer the following questions in a word, phrase or sentence each:**

- i. **What did Ramanujan's mother, Komalatamal use to do?**  
**Ans:** Ramanujan's mother, Komalatamal used to sing at a local temple.
- ii. **Why had Ramanujan's mother to look after him most of the time?**  
**Ans:** As Ramanujan's father, who was a clerk in a retail shop, was busy at work most of the day, his mother had to look after him most of the time.



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**iii. Why could Ramanujan not focus on subjects other than mathematics?**

**Ans:** Ramanujan could not focus on subjects other than mathematics because he was very intent on studying mathematics.

**iv. Why did Ramanujan wait for a long time for his surgery/operation?**

**Ans:** Ramanujan waited for a long time for his surgery/ operation because he did not have the money for it and had to wait till a surgeon volunteered to do the operation for free.

**v. Why did the English Mathematician view Ramanujan's work with hesitation?**

**Ans:** The English Mathematician viewed Ramanujan's work with hesitation as he (Ramanujan) lacked the educational qualifications.

**vi. What did M.J.M. Hill comment about Ramanujan's papers?**

**Ans:** M.J.M. Hill commented that Ramanujan's papers were riddled with holes.

**vii. What honour did Ramanujan receive in the year 1918?**

**Ans:** In 1918, he became a Fellow of the Royal Society and in the same year, he became the first Indian to be elected as Fellow to Trinity College, Cambridge.

**viii. Why is 22<sup>nd</sup> December observed as the National Mathematics Day in India?**

**Ans:** 22<sup>nd</sup> December is observed as the National Mathematics Day in India in honour of Ramanujan, the world's greatest mathematical genius.

**C. Answer the following questions briefly:**

**i. What interesting event happened in the history of mathematics in 1913?**

**Ans:** In the year 1913, an interesting event happened in the history of mathematics. The well-known English mathematician G.H. Hardy received a letter from an unknown clerk (Ramanujan) in India. When he read Ramanujan's letter which consisted of theorems and formulas on infinite series, fractions and numbers, he immediately recognized the genius in Ramanujan and also valued him as a mathematician of the highest quality. Ramanujan's stature as a great mathematician was established from this year with Hardy's stamp of approval.



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**ii. Why has Ramanujan's house in Kumbakanom been converted into a museum?**

**Ans:** Ramanujan's house in Kumbakanom has been converted into a museum so that mathematics lovers across the globe could visit the place where Ramanujan was born. It would also be a source of inspiration to children and a proper way to honour the great Indian mathematical genius, the man who knew infinity.

**iii. What characteristics did Ramanujan inherit from his mother?**

**Ans:** Ramanujan had a close relation with his mother who was a devout Brahmin. From her, he learned to sing religious songs and go to temples and observe austerities in eating in adherence to strict Brahmin culture.

**iv. What incident had led to Ramanujan's visit to Cambridge?**

**Ans:** Initially Ramanujan suffered a setback because most of the English mathematicians to whom his work was sent, did not review it properly. But when the well-known mathematician G.H. Hardy came across his letter which contained his theorems and formulas, he was very impressed. He enthusiastically wrote a letter back to Ramanujan and even before the latter received the letter, Hardy had already made preparations for his trip to Cambridge. Thus, Ramanujan visited Cambridge.

**v. Why did Ramanujan's health deteriorate in England?**

**Ans:** Ramanujan had health problems throughout his life. But living in a country far away from home and obsessively involved with mathematics further deteriorated his health. Moreover, the stress and strain of his work and the scarcity of vegetarian food during the First World War had worsened his health.

**vi. How have the Government of India paid tribute to Ramanujan and his mathematical genius?**

**Ans:** 22<sup>nd</sup> December is observed as the National Mathematics Day in India in honour of Ramanujan. Dr. Manmohan Singh, the then Prime Minister of India declared this day as the National Mathematics Day on the 125<sup>th</sup> birth anniversary of Srinivasan Ramanujan. The year 2012 was also observed as the National Mathematics Year.

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