

Leonardo pisano bigollo essay sample



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Fibonacci's contributions to mathematics are remarkable. Even in the world today, we still make daily use of his discovery. His most outstanding contribution would be the replacement of decimal number system. Yet, few people realized it. Fibonacci had actually replaced the old Roman numeral system with the Hindu-Arabic numbering system, which consists of Hindu-Arabic (0-9) symbols. There were some disadvantages with the Roman numeral system: Firstly, it did not have 0's and lacked place value; Secondly, an abacus was usually required when using the system. However, Fibonacci saw the superiority of using Hindu-Arabic system and that is the reason why we have our numbering system today. He had included the explanation of our current numbering system in his book "Liber Abaci". The book was published in 1202 after his return to Italy. It was based on the arithmetic and algebra that Fibonacci had accumulated during his travels.

Fibonacci was born in Italy but was educated in North Africa where his father, Guilielmo, held a diplomatic post. His father's job was to represent the merchants of the Republic of Pisa who were trading in Bugia, later called Bougie and now called Bejaia. Bejaia is a Mediterranean port in northeastern Algeria. The town lies at the mouth of the Wadi Soummam near Mount Gouraya and Cape Carbon. Fibonacci was taught mathematics in Bugia and travelled widely with his father and recognised the enormous advantages of the mathematical systems used in the countries they visited. Fibonacci writes in his famous book Liber abaci (1202). Leonardo Pisano is better known by his nickname Fibonacci. He was born in Italy but was educated in North Africa where his father held a diplomatic post. Fibonacci was taught mathematics in Bugia and travelled widely with his father, recognising the

enormous advantages of the mathematical systems used in the countries they visited. Fibonacci ended his travels around the year 1200 and at that time he returned to Pisa.

There he wrote a number of important texts which played an important role in reviving ancient mathematical skills and he made significant contributions of his own. Of his books we still have copies of *Liber abbaci* (1202), *Practica geometriae* (1220), *Flos* (1225), and *Liber quadratorum*(1225). Even at a time when Europe was little interested in scholarship, there was widespread interest in Fibonacci's work. Fibonacci was a contemporary of Jordanus, but he was a far more sophisticated mathematician and his achievements were clearly recognised, although it was the practical applications rather than the abstract theorems that made him famous to his contemporaries. *Liber abbaci* was based on the arithmetic and algebra that Fibonacci had accumulated during his travels.

The book, which went on to be widely copied and imitated, introduced the Hindu-Arabic place-valued decimal system and the use of Arabic numerals into Europe. Indeed, although mainly a book about the use of Arab numerals, which became known as algorism, simultaneous linear equations are also studied in this work. The second section of *Liber abbaci* contains a large collection of problems aimed at merchants. They relate to the price of goods, how to calculate profit on transactions, how to convert between the various currencies in use in Mediterranean countries, and problems which had originated in China. In the third section were problems involving perfect numbers, problems involving the Chinese remainder theorem and problems involving summing arithmetic and geometric series.