# PASCAL

1623 - 1662

Blaise Pascal was yet another French mathematician, born in 1623. He was tremendously gifted but spent much of his life devoted to God, rather than mathematics. Being a contemporary of Newton, Descartes and Fermat it would have been easy for him to slip into obscurity, but several of his contributions reserved him a place in history.

As a young boy, Blaise was mad keen on geometry (angles, pretty pictures and stuff like that) and rediscovered many of Euclid's findings (Euclid was the master geometer person and published many important works - Pascal had not read them when he proved that the sum of the angles in a triangle is 180°). By the age of 18 Pascal had invented the world's first adding machine. Other mathematicians of the time were amazed, and his achievement is recognised even today in the fact that a computer language is named after him.

Pascal also did some work with Fermat (top mathematician of the 17th century) and between them they invented probability. Although they initially did this to help a friend who was a bit of a gambling freak and losing lots of money, it turned out to be one of the most important and widely used branches of mathematics ever.

While working on the theory of probability, Pascal rediscovered an ancient Chinese triangle. He found that there were dozens of incredible things about this triangle - now known as Pascal's Triangle:

* Sum each row to get the powers of 2
* Diagonal 2 gives the triangle numbers
* Prime numbered rows (only) have all entries that are multiples of that number
* Row 49, diagonal 6 gives the number of ways of choosing 6 things from 49 things
* Even the omnipresent Fibonacci numbers are there if you look hard enough
* And so many others!!!

Unfortunately for Blaise, at the age of 23 he developed a horrible medical condition known as dyspepsia. Along with his chronic insomnia, this caused his life to become a nightmare. His friend and rival, Descartes suggested he should stay in bed till eleven each day and drink nothing but beef tea. Surprisingly, this did not help. After a freak accident that left him dangling from a bridge and his horses drowned, Pascal became convinced that God was telling him to give up mathematics - so he did. Sixteen years later Pascal died from stomach cancer.

Oh, by the way. Blaise invented the one-wheel wheelbarrow, hydraulics and public transport. What a man!

## Top quotations from Monsieur Pascal

'All of man's troubles come from his not knowing how to sit still.'

'There is a God-shaped vacuum in the heart of every man.'