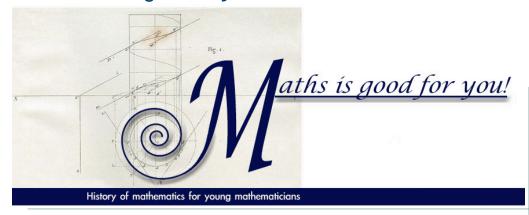
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Worksheet Fibonacci1

Teacher

Student

Class



Fibonacci Number Sequence... and some rabbits

Fibonacci learnt about mathematics during his travels to Africa, and wrote a book about it.

In this book he described a number sequence. It goes like this - start with

1 and another 1

add them up - you get 2

add the last number (2) and the previous number (1) – you get 3

add the last number (3) and the previous number (2) – you get 5...

Use the same method and you will get a sequence looks like this:

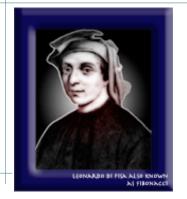
1, 1, 2, 3, 5, 8, 13, ...

Leonardo Pisano Fibonacci

Work out the next twenty terms of this sequence. \swarrow



Leonardo Pisano is better known as Fibonacci – son of the Bonaccis... and his other name Pisano comes from the place where he lived most of his life, Pisa, which is famous for its leaning tower. Building of the tower began when Fibonacci was three.



As a young man, Fibonacci travelled with his father who was a big merchant. Fibonacci's father was a representative of the merchants of Pisa, who imported and exported materials from and to northern Africa, mainly a place Bugia, now in Algeria. During these travels Fibonacci learnt mathematics known there.

born 1170, died 1250 in Pisa, Italy

Fibonacci is most famous for his description of the

He wrote a very famous book

number sequence, which in 19th century was given the name 'Fibonacci numbers' after its inventor. He was sometimes called Bigollo, which means 'traveller' and it is very probable that he got this nickname because he was travelling a lot. But Bigollo also means 'good-for-nothing' so – who knows...

He wrote a very famous book *Liber abaci* in 1202 to describe mathematics he learnt. He mentioned in this book that in Algeria he learnt Indian's number symbols, and also what he called Indian accounting.

It was in *Liber abaci* that Fibonacci first described his now famous numbers, through the problem of rabbits.



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This is how Fibonacci described his numbers - in relation to the way rabbits breed:

A man puts a pair of baby rabbits into an enclosed garden. Assuming each pair of rabbits bears a new pair every month, which from the second month on itself becomes productive, how many pairs of rabbits will there be in the garden after one year?

Investigation

On a grid below, each 'step on the ladder' represents a month. Start from the first month and add as many rabbits and as many branches which show the genealogy as you can possibly fit in! First pair has been drawn for you... Or you can try to calculate the same...

Month no. 1

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