Fibonacci Sequence

The **Fibonacci numbers** are a [sequence](#) of numbers in [mathematics](#) named after [Leonardo of Pisa](#), known as Fibonacci. Fibonacci wrote a book in 1202, called *Liber Abaci*. There he introduced the number pattern to Western European mathematics, although mathematicians in [India](#) already knew about it.

https://kids.kiddle.co/Fibonacci_number

From https://www.mathsisfun.com/numbers/fibonacci-sequence.html

The Fibonacci Sequence is the series of numbers:
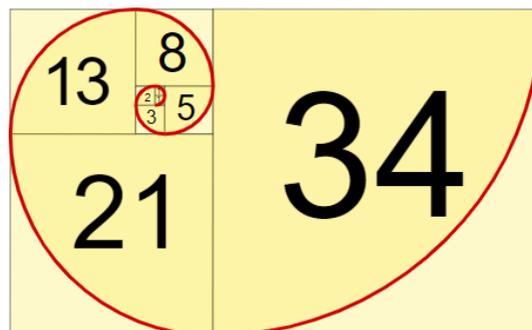
0, 1, 1, 2, 3, 5, 8, 13, 21, 34, …

The next number is found by adding up the two numbers before it:

- the 2 is found by adding the two numbers before it (1+1),
- the 3 is found by adding the two numbers before it (1+2),
- the 5 is (2+3),
- and so on!

Example: the next number in the sequence above is 21+34 = **55**

Makes A Spiral

When we make squares with those widths, we get a nice spiral:

Do you see how the squares fit neatly together?
For example 5 and 8 make 13, 8 and 13 make 21, and so on.

Take a good look at the Romanesco cauliflower -- its spiral follows the Fibonacci sequence.

Seed heads, pinecones, fruits and vegetables: Look at the array of seeds in the center of a sunflower and you'll notice what looks like spiral patterns curving left and right. Amazingly, if you count these spirals, your total will be a Fibonacci number. You can decipher spiral patterns in pinecones, pineapples and cauliflower that also reflect the Fibonacci sequence in this manner.

Flowers and branches: Some plants express the Fibonacci sequence in their **growth points**, the places where tree branches form or split. One trunk grows until it produces a branch, resulting in two growth points. The main trunk then produces another branch, resulting in three growth points. Then the trunk and the first branch produce two more growth points, bringing the total to five. If you count the number of petals on a flower, you'll often find the total to be one of the numbers in the Fibonacci sequence. For example, lilies and irises have three petals, buttercups and wild roses have five, delphiniums have eight petals and so on.

(information above from https://science.howstuffworks.com/math-concepts/fibonacci-nature.htm)

When you're out and about have a look in nature for examples of Fibonacci numbers. Look for shells, trees and flowers. Galaxies, and hurricanes have been shown to match a Fibonacci spiral.