Fibonacci sequence

The *Fibonacci sequence* F_n is defined by the property that $F_n = F_{n-1} + F_{n-2}$ for every $n \geq 2$.

We usually require that $F_0 = F_1 = 1$.

The sequence begins $1, 1, 2, 3, 5, 8, 13, 21, \ldots$

The numbers in this sequence are called *Fibonacci numbers* and the equation defining the sequence is called the *Fibonacci equation*. The sequence is named after Leonardo Pisano Fibonacci.

The ratio of consecutive Fibonacci numbers tends to the golden ratio, ϕ:

$$\lim_{n \to \infty} \frac{F_{n+1}}{F_n} = \phi = \frac{1 + \sqrt{5}}{2}.$$

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