

## Fibonacci sequence

The Fibonacci sequence is defined through the recurrence relation  $F_n = F_{n-1} + F_{n-2}$ .

It can also be expressed in *closed form*:

$$F_n = \left\lfloor \frac{1}{\sqrt{5}} \phi^n \right\rfloor, \quad \phi = \frac{1 + \sqrt{5}}{2}$$

The first 8 numbers of the sequence are:

$F_1$	$F_2$	$F_3$	$F_4$	$F_5$	$F_6$	$F_7$	$F_8$
1	1	2	2	3	3	4	4