

Collatz conjecture: the following process will always terminate, no matter what value of n is used.

Process: ① $n=1$: Stop.

② n even : divide by 2

③ n odd : multiply by 3 + add 1

Ex: $n=5$.

$5 \xrightarrow{\textcircled{3}} 16 \xrightarrow{\textcircled{2}} 8 \xrightarrow{\textcircled{2}} 4 \xrightarrow{\textcircled{2}} 2 \xrightarrow{\textcircled{2}} 1$ Stop
①

Example : Fibonacci sequence :

0	1	2	3	4	5	6
1	1	2	3	5	8	13

How to find n^{th} term with only a few variables?