$f(N) = f(N-1) + f(n-2)$ — Mathematically

Where N starts at 0

$$f(1) = f(1-1) + f(1-2)$$

Golden Ratio = $\frac{A+B}{A} = \frac{A}{B} = \varphi$ = Symbol for Golden Ratio

N starts at 0

$f_N = f_{n-1} + f_{n-2}$ for when $n \geq 2$

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if $N = 1$ $f(1) = 1$ if $N = 0$ $f(0) = 0$

$f_0 = f_{n-1} + f_{n-2}$

$f_0 = 1 + 0$ $f_2 = 1$

$f_3 = f_2 + f_1$

$f_3 = 1 + 1 \qquad f_3 = 2$

$f_4 = f_3 + f_2$

$f_4 = 2 + 1 = f_4 = 3$

$f_5 = f_4 + f_3$

$f_5 = 3 + 2 \qquad f_5 = 5$

$f6 = f_5 + f_4$

$f6 = 5 + 3 = f6 = 8$