

Step-1

Fibonacci sequence: Fibonacci sequence is given as follows:

0, 1, 1, 2, 3, 5, 8, 13,â€¦

To prove that every third Fibonacci number in Fibonacci sequence is an even number.

Step-2

Fibonacci number follows the following rule.

$$F_{k+2} = F_{k+1} + F_k$$

This produces the following sequence of numbers:

Even, odd, odd, even, odd, odd, evenâ€¦.

Step-3

Here, every even number comes at third place.

Step-4

Therefore, every third Fibonacci number in Fibonacci sequence is an even number.