



# The Fibonacci Sequence

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The Fibonacci sequence is an infinite sequence of numbers that starts with 0, 1. After that each number in the sequence is obtained by adding the the two previous numbers in the sequence. For example, the third number in the sequence is 1 which you get by adding  $0 + 1$ . So we now have the first three numbers in the sequence: 0, 1, 1. You get the fourth number in the sequence by adding  $1 + 1$ , and our sequence is 0, 1, 1, 2. The fifth number in the sequence is 3 which you get by adding  $1 + 2$ .

So we have figured out that the beginning of the Fibonacci sequence is:

0, 1, 1, 2, 3, ...

- What is the eighth number in the Fibonacci sequence?
- What is the sixth number in the Fibonacci sequence?
- What is the tenth number in the Fibonacci sequence?
- List as much of the Fibonacci sequence as you can in 5 minutes?





# The Fibonacci Spiral

In the grid below, build a *counterclockwise* Fibonacci spiral pattern using squares. You do not need to color in the squares, you can just draw their outline. **Important:** the next square is a 1x1 square and should be placed on top of the square that is already on the grid. After that place a 2x2 square to the left of the two 1x1 squares shown, so that the 1x1 squares form the right side of the 2x2 square. The square after that, has a side of length 3 and should be placed below the squares you have created.

