Given the number k, *return the minimum number of Fibonacci numbers whose sum is equal to*k, whether a Fibonacci number could be used multiple times.

The Fibonacci numbers are defined as:

* F1 = 1
* F2 = 1
* Fn = Fn-1 + Fn-2 , for n > 2.

It is guaranteed that for the given constraints we can always find such fibonacci numbers that sum k.

**Example 1:**

**Input:** k = 7

**Output:** 2

**Explanation:** The Fibonacci numbers are: 1, 1, 2, 3, 5, 8, 13, ...

For k = 7 we can use 2 + 5 = 7.

**Example 2:**

**Input:** k = 10

**Output:** 2

**Explanation:** For k = 10 we can use 2 + 8 = 10.

**Example 3:**

**Input:** k = 19

**Output:** 3

**Explanation:** For k = 19 we can use 1 + 5 + 13 = 19.

**Constraints:**

* 1 <= k <= 10^9