

## 1414. Find the Minimum Number of Fibonacci Numbers Whose Sum Is K

ly Submissions (/contest/biweekly-contest-24/problems/find-the-minimum-number-of-fibonacci-numbers-whose-sum-is-k/submissions/)

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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:

- $F_1 = 1$
- $F_2 = 1$
- $F_n = F_{n-1} + F_{n-2}$ , for  $n > 2$ .

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

User Accepted:	3334
User Tried:	3821
Total Accepted:	3455
Total Submissions:	6537
Difficulty:	Medium

### 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:

- $1 \leq k \leq 10^9$

Discuss (<https://leetcode.com/problems/find-the-minimum-number-of-fibonacci-numbers-whose-sum-is-k/discuss>)

JavaScript



```
1 /**
2  * @param {number} k
3  * @return {number}
4  */
5 var findMinFibonacciNumbers = function(k) {
6
7 };
```