

[All Contests](#) > [ProjectEuler+](#) > Project Euler #2: Even Fibonacci numbers

Project Euler #2: Even Fibonacci numbers



by shashank21j

Problem

Submissions

Leaderboard

Discussions

This problem is a programming version of [Problem 2](#) from [projecteuler.net](#)

Each new term in the Fibonacci sequence is generated by adding the previous two terms. By starting with **1** and **2**, the first **10** terms will be:

$$1, 2, 3, 5, 8, 13, 21, 34, 55, 89, \dots$$

By considering the terms in the Fibonacci sequence whose values do not exceed N , find the sum of the even-valued terms.

Input Format

First line contains T that denotes the number of test cases. This is followed by T lines, each containing an integer, N .

Constraints

- $1 \leq T \leq 10^5$
- $10 \leq N \leq 4 \times 10^{16}$

Output Format

Print the required answer for each test case.

Sample Input 0

```
2
10
100
```

Sample Output 0

```
10
44
```

Explanation 0

- For $N = 10$, we have $\{2, 8\}$, sum is **10**.
- For $N = 100$, we have $\{2, 8, 34\}$, sum is **44**.

[f](#) [t](#) [in](#)

Submissions: [21985](#)

Max Score: 100

Difficulty: Easy

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Java 7



```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8
```

```
9  public static void main(String[] args) {
10     Scanner in = new Scanner(System.in);
11     int t = in.nextInt();
12     for(int a0 = 0; a0 < t; a0++){
13         long n = in.nextLong();
14     }
15 }
16 }
17 }
```

Line: 1 Col: 1

[Upload Code as File](#)

Test against custom input

[Run Code](#)[Submit Code](#)

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