New Year's '17 P3 - Fibonacci Presents

Time limit: 1.0s **Memory limit:** 256M

Santa was very busy traveling around the world handing out presents. So busy, in fact, that he forgot to give you one! Not offended in the least, (it's *just* a Christmas present) you decide to break into Santa's place and claim what is rightfully yours.

Arriving at Santa's house, you realize that his bag can store items with a total mass equal to the k^{th} Fibonacci number. **Any amount more or less would result in very un-Christmas-y consequences.** Looking around, you notice a heap of n presents. The i^{th} present has a mass equal to the i^{th} (1-based) Fibonacci number, and a coolness factor of c_i. Deciding that Santa needs a quick reminder to bring you a present next year, you decide to **maximize** the coolness of the presents you "liberate".

Input Specification

Line 1: Two space separated integers k $(1 \leq k \leq 1\,000\,000\,000)$ and n $(1 \leq n \leq 1\,000\,000)$, the mass capability of Santa's sack and the number of presents, respectively.
Lines $2 \ldots n+2$: an integer c_i $(0 \leq c_i \leq 1\,000\,000)$, the i^{th} present's coolness.

Output Specification

A single integer, the maximal coolness of stolen items. If this is not possible, output `-1` instead.

Sample Input

```
12 11
0
0
1
4
7
2
8
10
8
12
10
```

Sample Output

```
37
```

Explanation for Sample Output

The presents have masses of 1, 1, 2, 3, 5, 8, 13, 21, 34, 55 and 89, while the required mass is 144. Take the presents with mass of 3, 5, 13, 34 and 89, for a total coolness of $4 + 7 + 8 + 8 + 10 = 37$.