Magical Candy Bags

You have **N** bags of candy. The *i*th bag contains arr[i] pieces of candy, and each of the bags is magical!

It takes you 1 minute to eat all of the pieces of candy in a bag (irrespective of how many pieces of candy are inside), and as soon as you finish, the bag mysteriously refills. If there were x pieces of candy in the bag at the beginning of the minute, then after you've finished you'll find that floor(x/2) pieces are now inside.

You have k minutes to eat as much candy as possible. How many pieces of candy can you eat?

Signature

```
int maxCandies(int[] arr, int K)
Input

1 ≤ N ≤ 10,000
1 ≤ k ≤ 10,000
1 ≤ arr[i] ≤ 1,000,000,000
```

Output

A single integer, the maximum number of candies you can eat in **k** minutes.

Example 1

```
N = 5

k = 3

arr = [2, 1, 7, 4, 2]

output = 14
```

In the first minute you can eat 7 pieces of candy. That bag will refill with floor(7/2) = 3 pieces.

In the second minute you can eat 4 pieces of candy from another bag. That bag will refill with floor (4/2) = 2 pieces.

In the third minute you can eat the 3 pieces of candy that have appeared in the first bag that you ate.

In total you can eat 7 + 4 + 3 = 14 pieces of candy.