



# Bon Appétit



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## Problem

## Submissions

## Leaderboard

## Discussions

Anna and Brian order  $n$  items at a restaurant, but Anna declines to eat any of the  $k^{th}$  item (where  $0 \leq k < n$ ) due to an allergy. When the check comes, they decide to split the cost of all the items they shared; however, Brian may have forgotten that they didn't split the  $k^{th}$  item and accidentally charged Anna for it.

You are given  $n$ ,  $k$ , the cost of each of the  $n$  items, and the total amount of money that Brian charged Anna for her portion of the bill. If the bill is fairly split, print `Bon Appetit`; otherwise, print the amount of money that Brian must refund to Anna.

## Input Format

The first line contains two space-separated integers denoting the respective values of  $n$  (the number of items ordered) and  $k$  (the 0-based index of the item that Anna did not eat).

The second line contains  $n$  space-separated integers where each integer  $i$  denotes the cost,  $c[i]$ , of item  $i$  (where  $0 \leq i < n$ ).

The third line contains an integer,  $b_{charged}$ , denoting the amount of money that Brian charged Anna for her share of the bill.

## Constraints

- $2 \leq n \leq 10^5$
- $0 \leq k < n$
- $0 \leq c[i] \leq 10^4$
- $0 \leq b \leq \sum c[i]$

## Output Format

If Brian did not overcharge Anna, print `Bon Appetit` on a new line; otherwise, print the difference (i.e.,  $b_{charged} - b_{actual}$ ) that Brian must refund to Anna (it is guaranteed that this will always be an integer).

## Sample Input 0

```
4 1
3 10 2 9
12
```

## Sample Output 0

```
5
```

## Explanation 0

Anna didn't eat item  $c[1] = 10$ , but she shared the rest of the items with Brian. The total cost of the shared items is  $3 + 2 + 9 = 14$  and, split in half, the cost per person is  $b_{actual} = 7$ . Brian charged her  $b_{charged} = 12$  for her portion of the bill, which is more than the 7 dollars worth of food that she actually shared with him. Thus, we print the amount Anna was overcharged,  $b_{charged} - b_{actual} = 12 - 7 = 5$ , on a new line.

## Sample Input 1

```
4 1
3 10 2 9
7
```

## Sample Output 1

```
Bon Appetit
```

## Explanation 1

Anna didn't eat item  $c[1] = 10$ , but she shared the rest of the items with Brian. The total cost of the shared items is  $3 + 2 + 9 = 14$  and, split in half, the cost per person is  $b_{actual} = 7$ . Because this matches the amount,  $b_{charged} = 7$ , that Brian charged Anna for her portion of the bill, we print `Bon Appetit` on a new line.



Contest ends in 8 hours



Submissions: 4413




Max Score: 10

Difficulty: Easy

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```
1 package main
2 import "fmt"
3
4 func main() {
5     //Enter your code here. Read input from STDIN. Print output to STDOUT
6 }
```

Line: 6 Col: 2

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