

## Problem: *Bon Appetit*

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Anna and Brian order  $n$  items at a restaurant, but Anna declines to eat any of the  $i$  item (where  $i$  is the 0-based index of the item) 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  $i$  item and accidentally charged Anna for it. You are given  $n$ ,  $i$ , 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  $i$  (the 0-based index of the item that Anna did not eat).

The second line contains  $n$  space-separated integers where each integer  $c_i$  denotes the cost,  $c_i$ , of item  $i$  (where  $i$  is the 0-based index of the item).

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

### Constraints

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### Output Format

If Brian did not overcharge Anna, print `Bon Appetit` on a new line; otherwise, print the difference (i.e.,  $b - \text{fair share}$ ) 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  $i=1$ , but she shared the rest of the items with Brian. The total cost of the shared items is  $3+10+9=22$  and, split in half, the cost per person is  $11$ . Brian charged her  $12$  for her portion of the bill, which is more than the  $11$  dollars worth of food that she actually shared with him. Thus, we print the amount Anna was overcharged,  $12-11=1$ , 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 , but she shared the rest of the items with Brian. The total cost of the shared items is and, split in half, the cost per person is . Because this matches the amount, , that Brian charged Anna for her portion of the bill, we print Bon Appetit on a new line.

### *Solution:*

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```
int main()
{

    long items, refuse;
    long charged;
    long total=0;

    cin>>items >> refuse;
    long cost[items];

    /*Feeding the data*/
    For ( long i=0; i<items; i++)
        {
            cin>>cost[i];
            total+=cost[i];
        }
    cin>>charged;

    /*The algorithm*/
    (charges*2==total ? cout<<cost[refuse]/2 : cout<<"Bon Appetit");

    return 0;
}
```

- Anshul Aggarwal