

I Interview Question

Time limit: 1s

*Fizz Buzz* is a party game that is often used as a programming exercise in job interviews. In the game, there are two positive integers  $a$  and  $b$ , and the game consists of counting up through the positive integers, replacing any number by *Fizz* if it is a multiple of  $a$ , by *Buzz* if it is a multiple of  $b$ , and by *FizzBuzz* if it is a multiple of both  $a$  and  $b$ . The most common form of the game has  $a = 3$  and  $b = 5$ , but other parameters are allowed.

Your task here is to solve the reverse problem: given a transcript of part of the game (not necessarily starting at 1), find possible values of  $a$  and  $b$  that could have been used to generate it.

Figure I.1 shows some sample sequences for various values of  $a$  and  $b$ .

$a = 3, b = 5:$

1 2 Fizz 4 Buzz Fizz 7 8 Fizz Buzz 11 Fizz 13 14 FizzBuzz

$a = 6, b = 2:$

1 Buzz 3 Buzz 5 FizzBuzz 7 Buzz 9 Buzz 11 FizzBuzz 13

$a = 4, b = 4:$

1 2 3 FizzBuzz 5 6 7 FizzBuzz 9 10 11 FizzBuzz 13 14

Figure I.1: Example sequences for *Fizz Buzz*.

Input

The input consists of:

- One line with two integers  $c$  and  $d$  ( $1 \leq c \leq d \leq 10^5$ ), indicating that your transcript starts at  $c$  and ends at  $d$ .
- One line with  $d - c + 1$  integers and strings, the contents of the transcript.

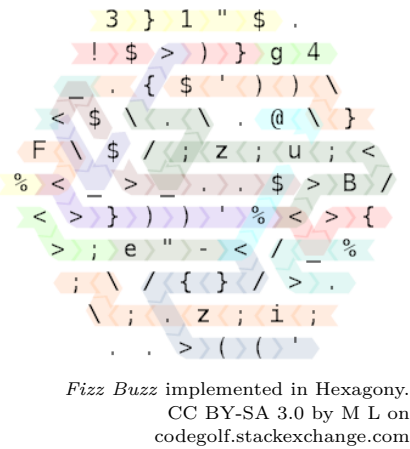
It is guaranteed that the transcript is valid for some integers  $a$  and  $b$  with  $1 \leq a, b \leq 10^6$ , according to the rules laid out above.

Output

Output two positive integers  $a$  and  $b$  ( $1 \leq a, b \leq 10^6$ ) that are consistent with the given transcript.

If there are multiple valid solutions, you may output any one of them.

Sample Input 1	Sample Output 1
7 11 7 8 Fizz Buzz 11	3 5



**Sample Input 2**

```
49999 50002
49999 FizzBuzz 50001 Fizz
```

**Sample Output 2**

```
2 125
```

**Sample Input 3**

```
8 11
Buzz Buzz FizzBuzz Buzz
```

**Sample Output 3**

```
10 1
```

**Sample Input 4**

```
10 15
10 11 12 13 14 15
```

**Sample Output 4**

```
8 23
```