

# New Year's '18 P2 - Mimi and Christmas Cake

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**Time limit:** 2.0s    **Memory limit:** 256M

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For Christmas, Mimi got a fruit cake from her parents. The cake is sliced into  $N$  slices, and the  $i^{\text{th}}$  slice has  $f_i$  pieces of fruit on it. However, as Mimi is trying to lose weight as a New Year's resolution, she will only eat slices which have a prime number of fruits on them. Help Mimi determine how many slices of cake she can eat.

## Constraints

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### Subtask 1 [10%]

$$1 \leq N \leq 100$$

$$1 \leq f_i \leq 100$$

### Subtask 2 [10%]

$$1 \leq N \leq 10^5$$

$$1 \leq f_i \leq 1000$$

### Subtask 3 [80%]

$$1 \leq N \leq 10^5$$

$$1 \leq f_i \leq 10^5$$

## Input Specification

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The first line of input will contain a single integer,  $N$ , the number of slices.

The next and final line of input will contain  $N$  space-separated integers:  $f_1, f_2, \dots, f_N$ , the number of pieces of fruit on the  $i^{\text{th}}$  slice of cake.

## Output Specification

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A single integer, the number of slices of cake Mimi can eat.

## Sample Input

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3
1 5 8
```

## Sample Output

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