Cassette P65849_en

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You have a cassette with t seconds of length, and n songs with lengths $d_1, d_2, \ldots, d_n$. Your aim is to store the maximal number of whole songs in the cassette. You must consider that songs must be recorded with a second of separation between them.

Input

The input consists of a series of cases separated with a line in white. Each case consists of two lines: The first one has t and n. The second one has n numbers: $d_1, d_2, \ldots, d_n$. You can assume $1 \leq t \leq 10^8$, $n \geq 1$, and that for each i, $1 \leq d_i \leq 10^6$.

Output

For each case of the input, your program must print the maximal number of whole songs that fit in the cassette, bearing that they must be separated by a second in mind.

- **TestA:** In some test cases $n \leq 100$ will be fulfilled. **60 Points**
- **TestB:** Other test cases will include cases with $n \leq 10^5$. **40 Points**

Sample input

```
11 5
2 2 2 2 2

10 5
2 2 2 2 2

100 1
101

1000 3
17 1 17
```

Sample output

```
4
3
0
3
```

Problem information

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