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## Cantine

X16380\_en

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Every day, the UPF canteen offers a different menu. Customers can purchase any combination of items on the menu. Alice is an open-minded person that likes to mix any kind of food, and she wonders how many different combinations of menu items she can afford.

In order to pay for her meal, Alice has a restaurant ticket with total value  $T$ . There is a chance that Alice does not like any item on the menu, so one possible combination is not buying any menu item at all.

### Input

The input consists of several test cases. Each test case starts with a pair of integers  $T < 1000$  (the value of the restaurant ticket) and  $P < 1000$  (the number of menu items). The next  $P$  numbers denote the price  $P_i$  of each menu item  $i$ , satisfying  $P_i < 300$ .

### Output

For each test case, output the total number of affordable combinations.

#### Sample input

```
1 1
1
2 2
1 1
3 3
1 1 1
4 4
1 1 1 1
10 4
1 2 4 6
6 5
1 1 1 3 3
8 5
9 8 4 2 1
```

#### Sample output

```
2
4
8
16
13
25
9
```

In the first four examples, Alice can afford any of the  $2^P$  combinations.

### Problem information

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