Summer Institute '17 Contest 1 P8 - Mo' Money

Time limit: 3.0s   **Memory limit:** 256M

Max has a number of coins and wants to know how many ways he can use some or all of the coins to reach a target value. Can you write a program to help him out?

Input Specification

The first line of input will contain two space separated positive integers, n $(n \leq 15)$, the number of coins Max has, and t $(t \leq 10^6)$, the target value he wants to reach. The second line of input will contain n space separated positive integers, a_1 through a_n, where a_i $(a_i \leq 5 \times 10^5)$ is the value of the ith coin.

Output Specification

Output a single integer on a line by itself, representing the number of ways Max can combine his coins to reach his target value.

Sample Input 1

```
6 20
3 10 4 7 3 6
```

Sample Output 1

```
6
```

Sample Input 2

```
10 3500
1000 500 750 250 100 800 1200 900 1300 3000
```

Sample Output 2

```
9
```