

Coin Change

Time Limit: 1.0s **Memory Limit:** 16M

Given a value of x cents, and an infinite supply of coins of n denominations, followed by their denominations, find the least amount of coins required to make change for x .

Input Specification

Line 1: x , an integer between 1 and 10 000.

Line 2: n , the number of different denominations.

Line 3 . . . 3 + n : the denominations of the coins.

Output Specification

An integer, on a single line - the least coins required to make change for x .

Sample Input

```
24
4
12
13
5
6
```

Sample Output

```
2
```