

# Coin Change

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

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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

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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

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

## Sample Input

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

## Sample Output

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```
2
```