Cent Savings

by Tobias Werth

The supermarket has recently started to round the total price of a purchase to the nearest multiple of 10 cents, with 5 cents being rounded upwards. For example, 94 cents are rounded to 90 cents, while 95 are rounded to 100. Antonio has just learned about this policy right after he has lined up all his groceries onto the conveyor belt of the cash register. Being always very concerned about saving for his early retirement, he is trying to figure out how to take advantage of this new policy. He grabs a few dividers available at the cash register, and is now trying to figure out how to use the dividers to break his purchase into separate purchases so that the total cost would be minimal.

Input

The input consists of two lines. The first line contains two integers: the number of items n ($1 \leq n \leq 2000$) and the number of dividers d ($1 \leq d \leq 20$). The second line contains n integers $p_1, \ldots, p_n$ ($1 \leq p_i \leq 10000$), the prices of the items in cents, given in the same order as the items appear on the belt.

Output

Output the minimum amount of money needed to buy all the items, using up to d dividers.

Examples

Sample input 1

```
5 1
13 21 55 60 42
```

Sample output 1

```
190
```

Sample input 2

```
5 1
1 1 1 1 1
```

Sample output 2

```
0
```

Limits

Time limit is 3 second.

Memory limit is 256 megabytes.