

You and $K - 1$ friends want to buy N flowers. Each flower f_i has some cost c_i . The florist is greedy and wants to maximize his number of new customers, so he increases the sale price of flowers for repeat customers; more precisely, if a customer has already purchased x flowers, price P for f_i is $P_{f_i} = (x + 1) \times c_i$.

Find and print the minimum cost for your group to purchase N flowers.

Note: You can purchase the flowers in any order.

Input Format

The first line contains two integers, N (number of flowers to purchase) and K (the size of your group of friends, including you).

The second line contains N space-separated positive integers describing the cost $(c_0, c_1, \dots, c_{N-2}, c_{N-1})$ for each flower f_i .

Constraints

- $1 \leq N, K \leq 100$
- $1 \leq c_i \leq 10^6$
- $answer < 2^{31}$
- $0 \leq i \leq N - 1$

Output Format

Print the minimum cost for buying N flowers.

Sample Input 0

```
3 3
2 5 6
```

Sample Output 0

```
13
```

Sample Input 1

```
3 2
2 5 6
```

Sample Output 1

```
15
```

Explanation

Sample Case 0:

There are 3 flowers and 3 people in your group. Each person buys one flower and the sum of prices paid is

13 dollars, so we print **13**.

Sample Case 1:

There are **3** flowers and **2** people in your group. The first person purchases **2** flowers, f_0 and f_1 , in order of decreasing price; this means they buy the more expensive flower first at price

$P_{f_1} = (0 + 1) \times 5 = 5$ *dollars* and the less expensive flower second at price

$P_{f_0} = (1 + 1) \times 2 = 4$ *dollars*. The second person buys the most expensive flower at price

$P_{f_2} = (0 + 1) \times 6 = 6$ *dollars*. We print the sum of these purchases (**5 + 4 + 6**), which is **15**.