

Greedy Florist

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

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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\$.