

There are flowers planted in a row from i to n . Each flower plant gives $a[i]$ amount of flower. Sam can gather flower from a single cell on each day. Sam has a special power using which he can multiply the flowers he gather on a day with $(k - (\text{current day} - 1))$ but he can only use it atmost k times. First day is 1. Sam has to find the subsequence in which he gathers flower so that he ll have maximum flower after k days.

Input Format

First line will have 2 integer n denoting the length of the flower bed and k denoting the maximum number of times sam can use that special power. Second line will have n space separated integers denoting the number of flowers on i th index.

Constraints

$1 \leq n \leq 1000$ $1 \leq k \leq n$ $0 \leq a[i] \leq 10^6$

Output Format

Print a single integer denoting the maximum number of flowers sam can get after k days.

Sample Input 0

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5 2
2 5 9 4 1
```

Sample Output 0

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22
```

Explanation 0

$9*2 + 4*1 = 22$