Math Formula

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Given n numbers, without changing their relative positions, add k multiplication signs ($\times$) and $(n-k-1)$ plus signs ($+$) in the between those numbers. You may add any number of parentheses to make the final result as large as possible.

Note that since there are $n-1$ multiplication signs and plus signs in total, there is exactly one sign between every two adjacent numbers.

Input

The first line contains 2 integers n, k $(2 \leq n \leq 15), (0 \leq k \leq n)$ – the number of numbers given and the number of multiplication signs

The second line contains n integers $a_1, a_2, ..., a_n$ $(0 \leq a_i \leq 9)$ – the given numbers.

Output

Print a single integer – the maximum possible value. It is guaranteed that the answer will be less than 2^{31}.

Example

standard input	standard output
5 2 1 2 3 4 5	120

Note

The test case requires $k = 2$ multiplicative signs and $(5 - 2 - 1) = 2$ plus signs. Those five number can be written as:

$$1 \times 2 \times (3 + 4 + 5) = 24$$

$$1 \times (2 + 3) \times (4 + 5) = 45$$

$$(1 + 2) \times 3 \times (4 + 5) = 81$$

$$...$$

$$(1 + 2 + 3) \times 4 \times 5 = 120$$