

# Problem I

## Flowers

Time limit: 1 second  
Memory: 1024 megabytes

### Problem Description

On his  $11^{\text{th}}$  birthday, Harry Potter was invited to attend the wizarding school to learn magic. One of his first lessons was how to use a magic wand. Harry went to the flower garden of the school to practice.

Hogwarts has a long flower bed planted with  $n$  magical flowers, where each flower has a beauty value denoted by  $a_i$ . Harry's task is to select a contiguous subarray of flowers such that the sum of their beauty values is maximized. If no subarray has a positive sum, the total beauty of the flowerbed is considered to be  $0$ .

Harry can choose to either not use or use his magic wand at most once on any contiguous subarray. Let the chosen subarray be denoted as  $[L, R]$  with  $1 \leq L \leq R \leq n$ . When Harry uses magic, the beauty value of each flower in the subarray will change, such that  $a_i$  becomes  $a_i \times X$  for  $L \leq i \leq R$ .

Harry wants to use the spell in such a way that the total beauty of the flowerbed is maximized. However, the flowerbed is quite long, and Harry doesn't know which subarray to select for the spell. Can you help Harry?

**Requirement:** Given the beauty values of the flowers  $a_1, a_2, \dots, a_n$ , help Harry compute the maximum beauty of the flowerbed after using his spell..

### Input Structure:

- The first line contains two integers  $n$  and  $X$ , where  $n \leq 5 \times 10^5$  and  $|X| \leq 10^6$ .
- The second line contains  $n$  integers  $a_1, a_2, \dots, a_n$ , where  $|a_i| \leq 10^6$ .

### Output Structure:

- A single integer, representing the maximum total beauty of the flowerbed after Harry uses his spell.

### Example:

<b>INPUT</b>	<b>OUTPUT</b>
5 2 -1 2 4 -3 4	14