Group

Description

There is a sequences of N numbers, cut them into no more than K groups without change there order, and each group at least L numbers. Calculate the sum of all the groups' value. From left to right, the value of the i-th group is the the sum of all numbers in the group multiply i. Give me the minimum sum.

Input

The first line is a number T indicate the number of test cases.(T < 20)

Then T cases, for each case:

First line is three numbers N, K, L as description.(1<=L<=N<=20000, 1<=K<=100)

Then N numbers ranged in [-1000, 1000].

Output

For each case, output the minimum sum in a line.

Sample Input

2

5 3 1

3 -2 -1 -4 5

5 3 2

3 -2 -1 -4 5

Sample Output

-1

1

Hint

To get the best answer you can try:

Case 1:

(3)(-2 -1 -4 5) or (3)(-2)(-1 -4 -5)

Case 2:

(3 -2)(-1 -4 5)