Sleeping at Work

You are at work. Unfortunately, there is a programming competition immediately after your working hours. In order to perform well, you need some sleep at work to regain as much energy as possible. Your workday is N minutes long, and each minute has an energy value, $e_0, e_1, \ldots, e_{N-1}$. Your sleep requirement is exactly M minutes, but you can only sleep for a maximum of R minutes in a row before your boss notices. There is a bonus if you sleep for several minutes in a row; the i-th minute in a row will have its energy value multiplied by i. For instance, if you sleep for three minutes having energy values of 10, 10 and 9, you will gain $10 + 2 \cdot 10 + 3 \cdot 9 = 57$ energy. After you have slept for M minutes, you are fully rested and cannot sleep any more that day. You have decided to write a computer program which calculates the maximum amount of energy you can gain during a given workday.

You can only start and stop sleeping exactly when the minute indicator on the clock changes.

Input

The first line of input contains a single integer T $(0 < T \leq 100)$, the number of test cases to follow. Each test case begins with a line containing three integer numbers, N $(0 < N \leq 500)$, the number of minutes in your workday, M $(0 < M \leq 50)$, the sleep requirement in number of minutes, and R $(0 < R \leq 50)$, the maximum number of minutes in a row you can sleep before your boss notices. Then follows a line containing N numbers, $e_0, e_2, \ldots, e_{N-1}$ $(0 \leq e_i \leq 100)$, each minute's energy value.

Output

For each test case output one line containing a single number, the highest amount of energy that can be gained by sleeping a total of M minutes, or output impossible if it is not possible to get the required amount of sleep.

Sample Input 1	Sample Output 1
2 10 3 3 10 10 9 6 5 4 2 1 4 4 10 6 1 1 2 3 4 5 6 7 8 9 10	57 impossible