

Problem G

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, \dots, 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.



Input specifications

The first line of input contains a single integer T , the number of test cases to follow. Each test case begins with a line containing three integer numbers, N , the number of minutes in your workday, M , the sleep requirement in number of minutes, and R , 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_1, \dots, e_{N-1} , each minute's energy value.

Output specifications

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.

Notes and Constraints

- $0 < T \leq 100$
- $0 < N \leq 500$
- $0 < M \leq 50$
- $0 < R \leq 50$
- $0 \leq e_i \leq 100$
- You can only start and stop sleeping exactly when the minute indicator on the clock changes.

Sample input

```
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
```

Output for sample input

```
57
impossible
```