7359 Sum Kind of Problem

For this problem you will compute various running sums of values for positive integers.

Input

The first line of input contains a single integer P, $(1 \leq P \leq 10000)$, which is the number of data sets that follow. Each data set should be processed identically and independently.

Each data set consists of a single line of input. It contains the data set number, K, followed by an integer N, $(1 \leq N \leq 10000)$.

Output

For each data set there is one line of output. The single output line consists of the data set number, K, followed by a single space followed by three space separated integers S_1, S_2 and S_3 such that:

S_1 = The sum of the first N positive integers.

S_2 = The sum of the first N odd integers.

S_3 = The sum of the first N even integers.

Sample Input

```
3
1 1
2 10
3 1001
```

Sample Output

```
1 1 1 2
2 55 100 110
3 501501 1002001 1003002
```