

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
```