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Greater New York
Programming Contest
Adelphi University
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B • The Rascal Triangle

The *Rascal Triangle* definition is similar to that of the *Pascal Triangle*. The rows are numbered from the top starting with 0. Each row `n` contains `n+1` numbers indexed from `0` to `n`. Using `R(n,m)` to indicate the index `m` item in the index `n` row:

    R(n,m) = 0 for n < 0 **OR** m < 0 **OR** m > n

The first and last numbers in each row (which are the same in the top row) are 1:

    R(n,0) = R(n,n) = 1

The interior values are determined by (*UpLeftEntry* * *UpRightEntry* + 1)/*UpEntry* (see the parallelogram in the array below):

```
R(n+1,m+1) = (R(n,m) * R(n,m+1) + 1)/R(n-1,m)
```

```
                    1

                 1     1

              1     2     1
                   / \
           1     3     3     1
                   \ /
        1     4     5     4     1
```
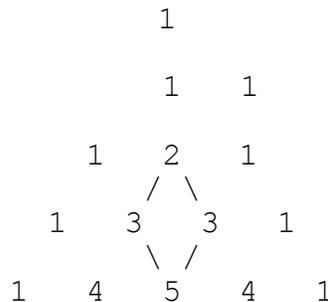
Write a program which computes `R(n,m)` the mth element of the nth row of the *Rascal Triangle*.

Input

The first line of input contains a single integer *P*, $(1 \le P \le 1000)$, which is the number of data sets that follow. Each data set is a single line of input consisting of 3 space separated decimal integers. The first integer is data set number, *N*. The second integer is row number *n*, and the third integer is the index *m* within the row of the entry for which you are to find `R(n,m)` the *Rascal Triangle* entry (0 <= m <= n <= 50000).

For each data set there is one line of output. It contains the data set number, *N*, followed by a single space which is then followed by the *Rascal Triangle* entry `R(n,m)` accurate to the nearest integer value.

Sample Input	Sample Output
5	1 1
1 4 0	2 5
2 4 2	3 411495886
3 45678 12345	4 24383845
4 12345 9876	5 264080263
5 34567 11398	