Xrange and Subsets

locked

by xrange

Problem Submissions Leaderboard Discussions Editorial

Xrange and his girlfriend Mariya are playing with subsets suddenly Mariya encountered a question which is given below: Given *N* numbers from *1* to *N* and another number *K*. How many subsets are possible having size greater than *1* and difference between adjacent elements is *K*.

Mariya somehow didn't able to solve that question so he asked Xrange to solve the question. If Xrange will solve the question he will get 2^N-*1* kisses from Mariya. Help Xrange in solving this question.

Input Format

First line of input contains number of test cases *T*. Each test case contains two space separated integers *N* and *K*.

Output Format

For each test case print number of subsets having size greater than *1* and difference between adjacent elements is *K*.

Constraints

$1 \leq T \leq 1000$
$1 \leq K \leq N \leq 1000$

Sample Input

```
3
4 1
2 1
3 2
```

Sample Output

```
6
1
1
```

Explanation

Test Case #*1*:

N=4 and *K*=1 Number of possible beautiful permutation will be:
{1,2}
{2,3}
{3,4}
{1,2,3}
{2,3,4}
{1,2,3,4}

Submissions: 120

Max Score: 20

Difficulty: Easy

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Current Buffer (saved locally, editable)

Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
```

```
    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
    }
}
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code

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