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Xrange and Subsets



by xrange

Problem

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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}

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Submissions: 120

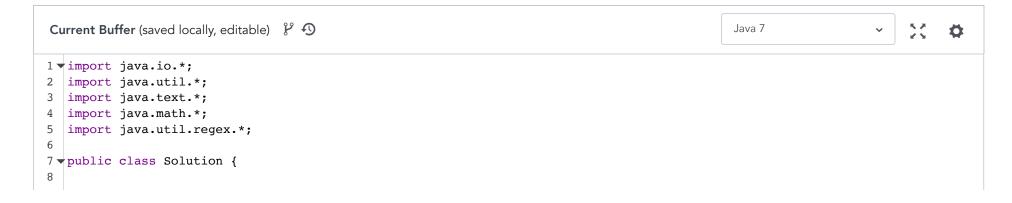
Max Score: 20

Difficulty: Easy

Rate This Challenge:



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<pre>public static void main(String[] args) { /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should b } } </pre>	e named Solution. */
	Line: 1 Col: 1
<u>↑ Upload Code as File</u> Test against custom input	Run Code Submit Code

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