Coding Arena

<C*deVita/>
the TCS Coding Contest

Time Left
06 hr 00 min 00 sec

A B C D E F G H

Problem : Prime Counters

Given a number N, let CP(N) denote the number of primes between 1 and N (inclusive of N). We call N a prime counter if CP(N) is a prime (N need not be a prime).

For example, CP(3) = 2, CP(4) = 2, CP(5) = 2, CP(7) = 4.

Input Format:

An integer T, number of test cases

T lines each containing two positive integers L, R separated by space

Output Format:

T lines containing the number of prime counters between L and R (both inclusive) in the ith test case (or NONE is no prime counter exists in that range)

Constraints:

$L \leq R \leq 10^6$

Example 1

Input
1
1 10

Output
4

Explanation
CP(1) = 0, CP(2) = 1, CP(3) = 2, CP(4) = 2, CP(5) = 3, CP(6) = 3, CP(7) = 4= CP(8) = CP(9) = CP(10)

Hence there are 4 prime counters, 3, 4, 5, 6 in the range 1 to 10.

Example 2

Input
2
2 20
3 30

Output
8
8

Explanation
Up to 10, we have 4 prime counters. Between 11 and 20 the prime counters are 11, 12, 17, 18 and hence the count is 8.
Between 21 and 30, we have no prime counters.

Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from <conio.h> / <process.h> as these files do not exist in gcc

Note:

For C and C++, return type of main() function should be int.

Rules & Regulations
Launch Code Editor
Notifications
Status messages

Submit Answer

I , confirm that the answer submitted is my own.I would like to provide attribution to the following sources.

Select File

Browse... Submit

 In Association with Campus Commune | Privacy Policy