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PRIME1 - Prime Generator

#number-theory (/problems/tag/number-theory)

Peter wants to generate some prime numbers for his cryptosystem. Help him! Your task is to generate all prime numbers between two given numbers!

Input

The input begins with the number t of test cases in a single line ($t \leq 10$). In each of the next t lines there are two numbers m and n ($1 \leq m \leq n \leq 1000000000$, $n - m \leq 100000$) separated by a space.

Output

For every test case print all prime numbers p such that $m \leq p \leq n$, one number per line, test cases separated by an empty line.

Example

Input :

```
2
1 10
3 5
```

Output :

```
2
3
5
7

3
5
```

Warning: large Input/Output data, be careful with certain languages (though most should be OK if the algorithm is well designed)

Information

After cluster change, please consider PRINT (<http://www.spoj.com/problems/PRINT/>) as a more challenging problem.

[Submit solution! \(/submit/PRIME1/\)](/submit/PRIME1/)

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nullptrchef101 (/users/nullptrchef101): 2021-07-29 10:29:00
Getting TLE, how to deal with it?



ujjwal_jain10 (/users/ujjwal_jain10): 2021-07-28 16:14:56
easy



mamad_urmu (/users/mamad_urmu): 2021-07-20 10:34:14
learning segmented sieve is good , but there is a simpler solution.
you can simply make a function that gets an integer as an input and checks it is prime or not and returns false or true.
then write a for loop and generate all numbers from a to b (to inputs of probleme) and give them to is prime function that you made before . if it returns true , print the number.



liuxueyang (/users/liuxueyang): 2021-07-20 07:44:22
I'm a faggot.

Last edit: 2021-08-03 02:40:08



adi123cm (/users/adi123cm): 2021-07-16 08:09:13
amazing problem to get confidence in segmented sieve !!!

Last edit: 2021-07-16 08:09:56



hemant_360 (/users/hemant_360): 2021-07-14 14:28:25
"time limit exceeded" Error is producing



nottarobot (/users/nottarobot): 2021-07-10 13:56:53
can someone share code in c++, i have tried a lot but failed



noob_sagar (/users/noob_sagar): 2021-07-02 20:24:57
SEGMENTED SIEVE is the way to go!



amish3 (/users/amish3): 2021-06-30 05:57:41
Used Segmented Seive. But still getting TLE. Any Idea, what mistake I am doing




asura_mao (/users/asura_mao): 2021-06-15 16:15:33
learn simple sieve and segmented sieve before approaching this problem, it would help a lot.

Leave a Comment

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Notes:

1. Don't post any source code here.
2. Please be careful, leave short comments only. Don't spam here.
3. For more discussion (hints, ideas, solutions) please visit our forum (/forum).
4. Authors of the problems are allowed to delete the post and use html code here (e.g. to provide some useful links).

 Submit solution! (/submit/PRIME1/)

Added by: Adam Dzedzej (/users/kfas)
Date: 2004-05-01
Time limit: 6s
Source limit: 50000B
Memory limit: 1536MB
Cluster: Cube (Intel G860) (/clusters/)
Languages: All except: NODEJS PERL6


Vote requirements



- ✗ user for 0 from 5 needed days
- ✗ solved 0 from 15 needed problems
- ✓ solve this problem

[illegible]

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