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Prime Generator

Problem Code: **PRIME1**

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

Input

The first line contains t, the number of test cases (less then or equal to 10).
Followed by t lines which contain 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. Separate the answers for each test case 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)

All submissions for this problem are available.

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Tags: [u_admin_codechef_pw](#)

Date Added: 1-12-2008

Time Limit: 2 secs

Source Limit: 50000 Bytes

Languages: CPP14, C, JAVA, PYTH 3.6, PYTH, CS2, ADA, PYPY, PYP3, TEXT, CPP17, PAS fpc, RUBY, PHP, NODEJS, GO, HASK, PERL, SCALA, kotlin, BASH, JS, PAS gpc, BF, LISP sbcl, CLOJ, LUA, D, CAML, ASM, FORT, FS, LISP clisp, SCM guile, PERL6, CLPS, WSPC, ERL, ICK, NICE, PRLG, ICON, PIKE, COB, SCM qobi, ST, NEM

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