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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/)