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Time Complexity: Primality ■



Problem Submissions

Leaderboard

Discussions

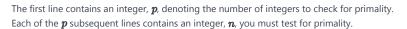
Editorial

Check out the resources on the page's right side to learn more about asymptotic analysis. The video tutorial is by Gayle Laakmann McDowell, author of the best-selling interview book Cracking the Coding Interview.

A prime is a natural number greater than 1 that has no positive divisors other than 1 and itself. Given p integers, determine the primality of each integer and print whether it is Prime or Not prime on a new line.

Note: If possible, try to come up with an $\mathcal{O}(\sqrt{n})$ primality algorithm, or see what sort of optimizations you can come up with for an $\mathcal{O}(n)$ algorithm. Be sure to check out the *Editorial* after submitting your code!

Input Format



Constraints

- $1 \le p \le 30$
- $1 \le n \le 2 \times 10^9$

Output Format

For each integer, print whether n is Prime or Not prime on a new line.

Sample Input

- 3
- 12
- 7

Sample Output

Not prime Prime Prime

Explanation

We check the following p = 3 integers for primality:

- 1. n = 12 is divisible by numbers other than 1 and itself (i.e.: 2, 3, 6), so we print Not prime on a new line.
- 2. n=5 is only divisible ${\bf 1}$ and itself, so we print Prime on a new line.
- 3. n=7 is only divisible ${f 1}$ and itself, so we print Prime on a new line.



Submissions: 4526 Max Score: 30 Difficulty: Medium

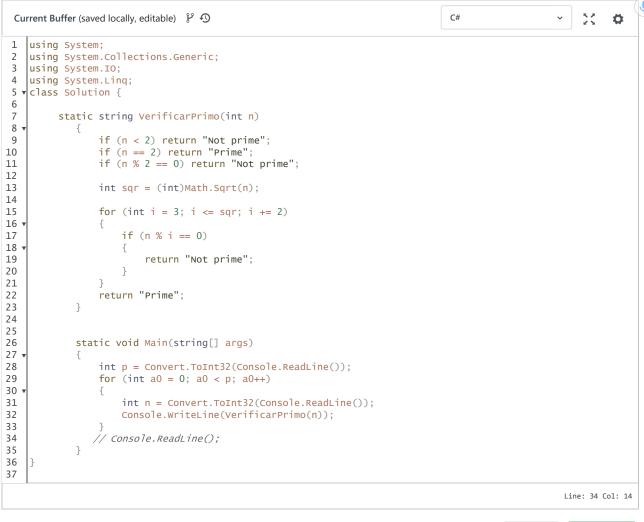
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Need Help?

Running Time and Complexity

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<u>♣ Upload Code as File</u> Test against custom input Run Code

Congrats, you solved this challenge! ✓ Test Case #0 ✓ Test Case #1 ✓ Test Case #2 ✓ Test Case #3 ✓ Test Case #4 ✓ Test Case #5 ✓ Test Case #6 ✓ Test Case #7 ✓ Test Case #8

Next Challenge

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