TCS NQT 2025

31 March 2025 Shift 2
Paper Analysis
Coding Questions

Paper Analysis

Numerical → Moderate to Hard

Verbal → Lengthy(Paragragh)

Advance section → Easiest(easier than foundation)

Coding → Q1 - On Prime number , Q2 - On Tree

Question1

Write a program that accepts two integer inputs, X and Y, which denote specific positions in the sequence of prime numbers. The program should identify the prime numbers at these positions, compute their product, subtract 1 from the result, and display the final output.

TestCases:

3 5

Output

54

Explaination

3rd prime number → 5

5^{th} prime number → 11

Output → (5*11)-1= 54

Java

```java
import java.util.Scanner;
public class PrimePositionProduct {

    // check if a number is prime
    public static boolean isPrime(int num) {
        if (num < 2) return false;
        for (int i = 2; i * i <= num; i++) {
            if (num % i == 0) return false;
        }
        return true;
    }

    // find the nth prime number
    public static int findNthPrime(int n) {
        int count = 0, num = 1;
        while (count < n) {
            num++;
            if (isPrime(num)) count++;
        }
        return num;
    }

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int X = scanner.nextInt();
        int Y = scanner.nextInt();

        // Finding the nth prime numbers
        int primeX = findNthPrime(X);
        int primeY = findNthPrime(Y);

        // Computing the required result
        int result = (primeX * primeY) - 1;

        // Printing the result
        System.out.println("Output: " + result);

        scanner.close();
    }
}
```

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C++

```cpp
#include <iostream>
using namespace std;
// check if a number is prime
bool isPrime(int num) {
    if (num < 2) return false;
    for (int i = 2; i * i <= num; i++) {
        if (num % i == 0) return false;
    }
    return true;
}
// Function to find the nth prime number
int findNthPrime(int n) {
    int count = 0, num = 1;
    while (count < n) {
        num++;
        if (isPrime(num)) count++;
    }
    return num;
}
int main() {
    int X, Y;
    cin >> X;
    cin >> Y;
    // Finding the nth prime numbers
    int primeX = findNthPrime(X);
    int primeY = findNthPrime(Y);
    int result = (primeX * primeY) - 1;
    cout << "Output: " << result << endl;
    return 0;
}
```

Python

```python
def is_prime(num):
    """Function to check if a number is prime."""
    if num < 2:
        return False
    for i in range(2, int(num ** 0.5) + 1):
        if num % i == 0:
            return False
    return True

def find_nth_prime(n):
    """Function to find the nth prime number."""
    count, num = 0, 1
    while count < n:
        num += 1
        if is_prime(num):
            count += 1
    return num

# Taking input for positions
X, Y = map(int, input().split())

# Finding the nth prime numbers
prime_X = find_nth_prime(X)
prime_Y = find_nth_prime(Y)
result = (prime_X * prime_Y) - 1
print(result)
```

If anyone Question2 ,
Help others by providing us with the question in the google form (in description)

leetcode playground: CLICK HERE

Codes are available in all languages