STUDENT REPORT

DETAILS

Name

Ganesh B

Roll Number

3BR23EE028

EXPERIMENT

Title

MATHS TEST

Description

Alice has a mathematics test for which she is underprepared. She has to do at least one question correctly to pass the test. He decides to do a question which needs her to find the smallest prime number which is larger than a given integer N. Your task is to find and return an integer value representing the smallest prime number larger than N.

Input Format:

input1: An integer value N

Output Format:

Return an integer value representing the smallest prime number larger than N.

Sample Input

6

Sample Output

7

Source Code:

```
def is_prime(num):
    if num <= 1:
        return False
    if num <= 3:
        return True
    if num % 2 == 0 or num % 3 == 0:
        return False
    i = 5
    while i * i <= num:
        if num % i == 0 or num % (i + 2) == 0:
            return False
        i += 6
    return True

def smallest_prime_greater_than(N):
    candidate = N + 1
    while True:
        if is_prime(candidate):
            return candidate
        candidate += 1

# Example usage
if __name__ == "__main__":
    import sys

    N = int(sys.stdin.readline().strip())
    result = smallest_prime_greater_than(N)
    print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %