**ROUND 2**

**Only one test case is given. You are required to generate more test cases yourself.**

**Remember the marking scheme. The complexity of the code doesn’t matter. Just ensure your code doesn’t loop infinitely.**

**We will test you code on other cases. All the answers of the test cases will not exceed MAX\_INT.**

Q:1 Write a program to find the sum of factorial of a number and nearest square.

Input: 10

Output: 3628809

Explanation: 3628800 is the factorial of 10 and nearest square number is 9.

(For the square number if there are two choices at equal distance, take the smallest one.)

Q:2 Write a program to find the sum of factorial of a number and nearest prime number.

Input: 10

Output: 3628811

Explanation: 3628800 is the factorial of 10 and nearest prime number is 11.

(For the prime number if there are two choices at equal distance, take the smallest one.)

Q:3 Write a program to find the sum of nearest square and nearest prime number.

Input: 10

Output: 20

Explanation: 9 is nearest square number and nearest prime number is 11.

(For the prime number if there are two choices at equal distance, take the smallest one.)

Q:3 Write a program to find the sum of nearest square and nearest prime number.

Input: 10

Output: 20

Explanation: 9 is nearest square number and nearest prime number is 11.

(For the prime number if there are two choices at equal distance, take the smallest one.)

Q:4 Write a program to find the sum of factorials of all the prime factors of the number. (A prime factor is considered only once)

Input: 20

Output: 7

Explanation: 20 = 2\*2\*5, Sum = 2+5

Input: 50

Output: 7

Explanation: 50 = 5\*5\*2, Sum = 2+5

Q:5 Write a program to find the sum of all the prime factors of the number. (A prime factor is added only once)

Input: 20

Output: 124

Explanation: 20 = 2\*2\*5, Sum = factorial(2) +factorial(5) = 2+120=124

Input: 50

Output: 124

Explanation: 50 = 5\*5\*2, Sum = factorial(2) +factorial(5) = 2+120=124