Problem 1: Calculate the Sum of Natural Numbers Write an algorithm that calculates the sum of all natural numbers from 1 to a given number n.

The user should input a value for n.

The algorithm should compute the sum using a loop and display the result.

STEP 1: start the program

STEP 2: input as n

STEP 3: Initialize total =0.

STEP 4: start the loop i from 1 to n.

STEP 5: Add the i to total.

STEP 6: Here return the total, to get the final result

STEP 7: stop

Problem 2: Check for Prime Number Write an algorithm that checks if a given number n is a prime number or not.

The user should input a value for n.

The algorithm should check whether the number is divisible by any number other than 1 and itself.

STEP 1: start

STEP 2: input as n.

STEP 3: check if n is lesss than or equal to 1 then print not prime and stop.

STEP 4: for loop i from 2 to n-1

STEP 5: if n%i ==0, print not prime and stop

STEP 6: if no divisors were found for the number , then print prime.

STEP 7: stop

Problem 3: Find the Maximum of Three Numbers Write an algorithm that takes three numbers as input and finds the largest of them.

The user should input three values: a, b, and c.

The algorithm should compare the numbers and print the maximum value.

STEP 1: start

STEP 2: get the input as three numbers as a,b,c.

STEP 3: if a is greater than both b and c then print a is greater

STEP 4: else if b is greater than botha a and c the print b is greater

STEP 5: else print c is greater

STEP 6: stop

Problem 4: Factorial Calculation Write an algorithm that calculates the factorial of a number n.

The user should input a number n.

The algorithm should compute the factorial by multiplying all the integers from 1 to n.

STEP 1: start

STEP 2: input as n

STEP 3:initialize factorial = 1.

STEP 4: get the loop from i=2 to n.

STEP 5: multiply factorial by i.

STEP 6:print factorial

STEP 7: stop

Problem 5: Check if a Number is Even or Odd Write an algorithm that checks if a given number n is even or odd.

The user should input a value for n.

The algorithm should check whether n is divisible by 2 and display the result as either "Even" or "Odd".

STEP 1: start

STEP 2: input as n

STEP 3: if n%2==0 then print even

STEP 4: else print odd

STEP 5: stop