Algorithms and Flowcharts

1. Algorithm to Calculate Factorial of a Number

Algorithm:

1. Start.
2. Input a number n.
3. Initialize fact = 1.
4. If n < 0, print "Factorial not defined for negative numbers" and stop.
5. For i = 1 to n:
    a. fact = fact * i.
6. Print fact.
7. Stop.

2. Algorithm to Find the Largest of Three Numbers

Algorithm:

1. Start.
2. Input three numbers a, b, c.
3. If a > b and a > c, print "a is the largest".
4. Else if b > a and b > c, print "b is the largest".
5. Else, print "c is the largest".
6. Stop.

3. Algorithm to Determine if a Number is Prime

Algorithm:

1. Start.
2. Input a number n.

3. If n <= 1, print "n is not prime" and stop.

4. For i = 2 to sqrt(n):

    a. If n % i == 0, print "n is not prime" and stop.

5. Print "n is prime".

6. Stop.