## CS199 Computer programming $\mid$ Spring 2018

## Sheet \#1: Problem Solving

1- Write an algorithm and draw a flowchart that will find and print the product of 3 numbers.

2- Draw a flowchart for a program that reads 10 numbers from the user and prints out their sum, and their product.

3- Draw a flowchart to find the sum of first 50 natural numbers.

4- Draw a flowchart that sums all the even numbers between 1 and 20

5- Draw a flowchart to find the largest of three numbers $\mathrm{A}, \mathrm{B}$, and C .

6- Draw a flowchart for computing factorial for number N .

7- Write down an algorithm and draw a flowchart to find and print the largest of N ( N can be any number) numbers. Read numbers one by one. Verify your result by a trace table. (Assume N to be 5 and the following set to be the numbers $\{14268\}$ )

8- Write an algorithm and draw a flowchart to print the square of all numbers from 1 tol0.

9- Write an algorithm and draw a flowchart to print the SUM of numbers from LOW to HIGH. Test with LOW=3 and $\mathrm{HIGH}=9$.

10- Write an algorithm and draw a flowchart to print all numbers between LOW and HIGH that are divisible by NUMBER.

11- Write an algorithm and draw a flowchart to count and print all numbers from LOW to HIGH by steps of STEP. Test with LOW=0 and HIGH=100 and STEP=5.

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12- Write an algorithm and draw a flowchart to print the multiplication table for 6's. i.e.
$---1 \times 6=6$
$---2 \times 6=12$
$----12 \times 6=72$

13- Draw flowchart to find if the triangle is isosceles, equilateral, or scalene.

14- Given a set of numbers, calculate their sum and the average value (mean)

$$
x=\frac{1}{n} \sum_{i=1}^{n} x_{i}
$$

Where n is the number of numbers in the set

