1) Write a program that takes an integer n and computes the factorial of n. (n!)

2) Write a program that takes an integer and determines whether it is a prime number or not.

3) Write a program that finds all the divisors of a number.

4) Write a program which prints the first n Fibonacci numbers.

5) Write a program that takes an integer n and computes the sum of the following series upto nth term.

a) $1 + 2 + 3 + \ldots \ldots + n$

b) $1^2 + 2^2 + 3^2 + \ldots \ldots + n^2$

c) $\frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \ldots \ldots + \frac{1}{n}$

d) $2 + 4 + 6 + \ldots \ldots$ *upto nth term*

e) $2 + 4 + 8 + 16 + \ldots \ldots$ *upto nth term*

f) $1 - 2 + 3 - 4 \ldots \ldots$ *upto nth term*

6)Write a program which finds the product of digits of an integer n.

7)Write a program that reverses the digits of an integer n. (For example, if the given integer is 1234, your program should output 4321)

8)Write a program that determines whether n is a perfect number. A perfect number is a number such that the sum of its divisors is equal to the number. Example of a few perfect numbers: 6, 28, 496, 8128.

9) Write a program that takes two integers and outputs their GCD (Greatest Common Divisor).

10) Write a program that takes an integer n and determines whether it is an Armstrong number or not. (An Armstrong number of three digits is an integer such that the sum of the cubes of its digits is equal to the number itself. For example, 371 is an Armstrong number since $3^3 + 7^3 + 1^3 = 371$.)