

**WIX1002 Fundamentals of Programming**  
**Tutorial 6 Java Methods**

1. Write statements for each of the following
  - a. Define a static method that returns the maximum number from 3 integer parameters.
  - b. Define a static method that determine whether the given integer is a square number.
  - c. Define a static method that use to compute combination function  $C(n,k)$ .  $C(n,k)$  gives the number of different k-element subsets that can be found in a given set of n elements.  $C(n,k) = n! / (k! (n-k)!)$
  - d. Define a static method that used to determine whether the parameter is a pentagonal number. A pentagonal number is a figurate number that extends the concept of triangular and square numbers to the pentagon.  $P_n = \frac{1}{2} n(3n - 1)$
  - e. Define a static method that displays the number of letters and the number of digits of a String parameter.
  - f. Define a static void method that generates 10 random numbers within 0 to 100 to the method's parameter. The random numbers can be accessed by the main method.
  - g. Define a static void method that returns the area and the circumference of a circle given the argument is radius.  $\text{Area} = \pi r^2$  and  $\text{Circumference} = 2 \pi r$ .
  - h. Define a static method that generate random number within 0 – 10. The method will return the first random number that generate twice.
2. Write a program that consists of a method that can display three numbers in decreasing order.