ASSIGNMENT

PERMUTATION

NAME: _____

Email ID _____

LOCATION_____

☐ SCHOOL   ☐ COLLEGE   ☐ COMPETITIVE EXAM _____

Q1) Evaluate the expression

   i) $^{10}P_7$

   ii) $^7P_4$

Q2) In how many ways, we can arrange all the letters of each word?
   i) PROVINCE
   ii) CANADA

Q3) Solve for the variable

    $^nP_3 = 60$

Q4) How many different ways are there to place four different coloured tiles in a row? Assume the tiles are red, blue, green and yellow.

Q5) How many different ways are there to place three different coloured tiles chosen form a set of five different coloured tiles in a row? Assume the five tiles are red, blue, green, yellow and orange.

Q6) In a school soccer league with seven teams, in how many ways can they finish in the position's "winner", "runner-up" and "third place?"

Q7) It is required to seat 4 Women and 5 Men in a row so that the women occupy the even places. How many such arrangements are possible?

Q8) There are 3 candidates for a classical, 5 for a mathematical, and 4 for natural science scholarship. In how many ways can these scholarships be awarded (one scholarship per subject)
   a) 60
   b) 30
   c) 15
   d) 20

Q9) A room has 6 doors. In how many ways can a person enter the room through one door and come out through a different?

Q10) In how many ways can 3 prizes be distributed among 4 boys, when

i) No boy gets more than one prize?
ii) A boy may get any number of prizes?
iii) No boy gets all the prizes?