**Economic Modelling 2**

**1.** How many words of 2 letters can you make with 4 letters **a, b, c, d**? Write the solutions.

**2**. Given three people {Michael, Peter, Rose}. Find the set of all permutations. What is the number of permutations?

**3**. John has 9 friends that he wants to invite to dinner but he can only invite six of them at one time. How many different groups can he invite?

**4**. There are three flavors of ice cream: **chocolate, lemon and vanilla**. You can have three scoops. Write all the possibilities. What is the number of this possibilities?

**5**. How many ways are there to arrange **3** letters **a, b, c**? Write the solutions.

**6**. How many ways are there to arrange **2** letters **a** and **2** letters **b**? Write the possibilities.

**7**. There are 12 boys and 8 girls in the class. How many delegations for five persons with 2 girls and 3 boys can we obtain ?

**8**. PIN number has 4 digits. The card is locked after 3 unsuccessful trials. What is the probability that somebody will cash money using an accidentally found card.

**9**. How many ways are there to arrange letters from a word **CLASSES** if vowels can’t be separated by consonants?

**10.** What is the probability of obtaining a 'four of a kind' in a poker dice in one throw? We throw five dice, four of a kind - 4 same values.