

5th Assignment: Counting Technique

Undergraduate of Telecommunication Engineering

MUH1F3 - PROBABILITY AND STATISTICS

Telkom University
Center of eLearning & Open Education Telkom University
Jl. Telekomunikasi No.1, Bandung - Indonesia

<http://www.telkomuniversity.ac.id>



1. In an exam 5 questions are provided with the type of answer "**Direct Method**" and "**Indirect Method**". How many ways the five questions can be answered?
2. Four numbers are provided, they are 3, 4, 5 and 6. Determine how many tens can be formed, if each number can only be used once?
3. The Telkom University extension phone number consists of 4 numbers. Calculate the probability we get for the fourth twins telephone number?
4. How many positive three-digit numbers can be formed from numbers are 2, 6, 7 and 9? (Give answers in two possible, i.e. numbers can be repeated & cannot be repeated)
5. How many numbers are less than 1000, which can be formed from numbers are 2, 6, 7 and 9? (Give answers in two possible, i.e. numbers can be repeated & cannot be repeated)
6. How many numbers are less than 680, which can be formed from numbers are 2, 6, 7 and 9? (Give answers in two possible, i.e. numbers can be repeated & cannot be repeated)

7. In a box consisting of 9 balls, 2 are red, 3 are blue and the rest are black. An experiment done to take 3 balls at once at random (chance every ball drawn is the same). Calculate the probability if:
- The three balls are different colors
 - All three balls are the same color
 - Two balls have the same color, the third ball is different
 - In the three balls drawn, there is at least 1 Blue ball
 - In the three balls drawn, there are a maximum of 2 Black balls
 - In the three balls drawn, there are at least 2 Black balls
8. There are 3 Mathematics books, 4 Physics books and 5 Chemistry books. The books will be arranged lengthwise in one bookshelf. Determine the number of possible arrangements, if:
- All books are considered different (free order)
 - Books must be grouped according to type and each group consists of different types of books
 - Books must be grouped according to type and each group consists of different types of books, but Mathematics groups must be placed in the first group of bookshelves.
 - If all Mathematics and Physics books are different, and Chemistry books consists of 3 Chemistry I and 2 Chemistry II