

Series N°1 (Combinatorial analysis)

Exercise 1 : How many ways can 5 people sit around a round table ?

Exercise 2 : How many words can be formed from the following words : griller, mississippi, economie.

Exercise 3 : 7 people walking around the mountain, 3 of them mountaineers (people from the region) and 4 tourists. In how

Exercise 4 : What is the number of car license plates that can be obtained from using two letters of the alphabet and three numbers in the following cases:

A- Do not repeat letters and numbers

B- Repeating the letter and not repeating the number

T- Repetition of letters and numbers.

Exercise 5 : The management of the Commercial Sciences Department wanted to form a pedagogical committee by conducting an electoral process. For this reason, two students from the first year, 3 students from the second year, and 4 students from the third year were nominated for this process. How many pedagogical committees can be formed from among the nominated students, noting that this committee consists of:

- Chairman: Must be a third-year student.
- Senior Vice President: Must be a second-year student.
- Second Deputy: Must be a first-year student.

Exercise 6 : In how many ways can a committee be formed consisting of 5 people from among 7 workers and 8 professors, provided that the committee contains at least 3 workers.

Exercise 7 : He randomly pulled 4 lamps from a box containing 10 lamps, including 6 that were invalid.

- What is the number of possible withdrawal times?
- How many withdrawals are possible such that one lamp is invalid.

How many pulls are possible so that at least one lamp is valid