
EXERCISE N° 01 :

Write a Pascal program that allows as to find the solution to the equation Ax2 + bx + c = 0.

by treating all possible cases (a = 0; b = 0; delta =0, …)

The program must be in the form of procedures where each procedure deals with only one case.

EXERCISE N°02:

Without using keywords Succ(x) or Pred(x), write a pascal program which displays the successor and predecessor of a positive integer entered on the keyboard, the program runs indefinitely until typing (-1).

The program must be in the form of a main program and two procedures one for the successor and the other for the predecessor.

EXERCISE N° 03 :

a) Write the factorial Turbo-Pascal function, which to a positive integer n associates n!.

b) Integrate this function into a program which asks the user for two integers' n and $k \leq n$, and which returns

$$\binom{n}{k} \text{ such us } \binom{n}{k} = \frac{n!}{(n-k)!}$$

EXERCISE N° 04:

Write a Pascal program which calculates $(x + a)^n$, according to the following formula

$$(x+a)^n = \sum_{k=0}^{n} \binom{n}{k} x^k a^{n-k}$$

Where x, a and n: are values entered on the keyboard by the user.

The program must be in the form of a main program and two functions.

EXERCISE N° 05 :

Write a pascal program that calculates the Exponential Series according to taylor's development (use function)

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} \ldots$$