SEMINAR 1

1. Solve the quadratic equation $ax^2 + bx + c = 0$. Complete discussion.

2. We suppose that we have to process n terms (n taken from the console). Compute the product of non-zero terms and determine the number of null terms introduced from the console.

3. Read a sequence of numbers from the console as long as a negative number is not introduced. Compute the arithmetic mean of the numbers.

4. Read a sequence of numbers from the console as long as their sum does not exceed a defined value MAX. Compute the number of introduced terms and their sum.

5. The series expansion of the function sin (x) is given by:

   $$\sin(x) = x / 1! - x^3 / 3! + x^5 / 5! - .....$$

   Calculate the approximate value of sin (x), for value of x taken from the console, with an error smaller than epsilon.

   Note: It is proved that the module of approximation error is less than a given epsilon value when the module of the next term to be added to the sum is less than epsilon.