Synopsis:

- **Modification of algebraic expressions.** The basic formulas for counting with powers and roots. The factorizations of algebraic expressions. Goniometrical formulas. The rules for calculating with complex numbers.

- **Basic properties of elementary functions.** The graph of elementary functions and their domain and range. Even, odd, inverse, periodic, increasing, decreasing and bounded function. Maximum and minimum of the function.

- **Sequences and series.** In particular, arithmetical and geometrical sequence. Infinite geometric series and its sum.

- **Basic types of equations and inequalities.** In particular, linear, quadratic, irrational, logarithmic, exponential and goniometrical equations, resp. inequalities.

- **Combinatorics and probability.** Permutations, variations, combinations. Classical probability.

- **Geometry - planimetry and solid geometry.** In particular, the areas and volumes of basic formations in the plane and in the space.

- **Analytic geometry in the plane and in the space.** Analytical equations of conic sections , lines and planes. Scalar and vector product.