Rezultatul p al testului t, furnizat ca un număr între 1 şi 0, reprezintă probabilitatea de a face o eroare dacă respingem ipoteza **H0** (ipoteză de nul). Dacă p este mai mic decât pragul de semnificaţie $\alpha = 0.05$, atunci respingem ipoteza **H0** şi admitem ca adevărată ipoteza **H1**, în caz contrar considerăm adevărată ipoteza **H0**.
În urma calculelor efectuate cu ajutorul aplicaţiei SPSS s-au obţinut indicatorii statistici de bază pentru fiecare subgrupă implicată în experimentul pedagogic [1].
Analizând aceşti indicatori, conchidem că nu există diferenţe semnificative între medii, din acest motiv se respinge ipoteza **H1** şi se adevereşte ipoteza **H0**, adică nu există diferenţe semnificative între media subgrupelor experimentale şi media subgrupelor de control. În aşa fel, considerăm că repartizarea pe subgrupe experimentale şi de control, în anii de studii 2014- 2015 şi 2015 - 2016 s-a efectuat corect, ceea ce permite efectuarea experimentului pedagogic.

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The Design of Metacognitive Strategies for Training Abilities to Solve Combinatorics Problems

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In our research, we started from the thesis that teachers' metacognitive actions positively impact student performance on state and national tests as well as on measures of higher-order thinking more typically associated with metacognition. It will be necessary to examine more closely the way in which teachers adapt. That is, how do they decide to make the adaptations they do? What knowledge do they access? What mental process do they engage in? Obviously, we must learn more about this process if we are to teach other teachers to engage in metacognitive actions. [1, p. 249]
Polya G. considered that a teacher of mathematics has a great opportunity to challenge the curiosity of his students by assigning them problems proportionate to their knowledge. The teacher who wishes to develop his students' ability to solve problems must instill some interest in problems into their minds and give them plenty of opportunity for imitation and practice. [2, p.5] Researchers in longitudinal studies aimed to provide the students with mathematical problems for which they did not know the algorithms, and which would provide them opportunities to find patterns, be systematic, and generalise findings. Combinatorics problems were well suited for these goals. We will consider ideas that are elicited by the tasks that were used in these longitudinal studies. [3, p.18] In many solvable problems using combinatorial elements, various real situations structured on the same mathematical model are described. The statement of the problem hides the common structure, and the role of the solver is to reveal the relationships between the dimensions that appear therein. One of G. Polya's recommendations given to solvers is "If you cannot solve the proposed problem, solve first a suitable related problem!" [4, p. 2]
In this presentation, we provide a procedure for the design of metacognitive strategies for the

development of problem solving abilities based on the examination of a cascade of suitable combinatorial problems, which allows the identification of these problems' solutions in a retrospective manner.

The process can be illustrated using the following set of problems, which are solved by creating combinatorial series:

Problem 1. How many different ways are there to spell out "abracadabra", always going from one letter to an adjacent letter? (The statement of the problem contains the image of the letters "abcdr" positioned within a square with a vertical diagonal. [4, p. 2])

Problem 2. In a network of streets of a city all blocks are the same size. How many ways are there of getting from the northern corner to the southern corner in the minimum number (10) of blocks? (That 10 is the minimum can be seen from the fact that each block, in addition to taking us either east or west, takes us southward one-tenth the total southward distance between the two corners. [4, p. 2])

Problem 3. A town in form of a rectangle is given with vertexes: A (south-west), B (north-west), C (north-east), D (south-east). The streets are situated parallel to AB or parallel to BC. Let n be length of AB, m length of BC. The tourist travels from A to C, passing the streets of the town either in the northern or eastern direction. How many ways are there for the tourist to manage that?

Problem 4. (Moivre problem) How many positive integer solutions does the equation $x_1 + x_2 + x_3 + \cdots + x_n = k$ have?

Problem 5. (Tube problem) A tube is given. It is filled with blue and red balls of the same size (in particular, radius of the bottom equals radius of the balls, so that balls can be placed in the tube one by one in vertical trajectory) in the following way: first, k_1 blue balls are placed, then one red one is added; after that k_2 blue balls are added and then one red ball is added and so on, finally, k_n blue balls are added and the last red ball is added. So, n is the number of red balls, $k_1 + k_2 + k_3 + \cdots + k_n = m$ - the number of blue balls. How many ways are there to place m blue balls in tube?

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