OPINION

under the procedure for acquisition of the educational and scientific degree "Doctor" of the PhD Thesis entitled: "The role of applied problems from the school mathematics course for the learning pourposes",

by candidate: **Ralitza Stamenkova,**

In the Scientific field: **1. Pedagogical Sciences**

Professional field: **1.3. Pedagogy of learning in …**

Doctoral program "Teaching Methofology of Mathematics and Infromatics",

Department „Education in mathematics and Informatics",

Faculty of Mathematics and Informatics (FMI),

Sofia University "St. Kl. Ohridski" (SU),

The statement report has been prepared by: Prof. Dr. Toni Kondeva Chehlarova, Institute of Mathematics and Informatics, Bulgarian Academy of Sciences, in my capacity as a member of the scientific jury, according to Order No. RD 38-669/20.12.2023 of the Rector of Sofia University.

1. **General characteristics of the dissertation thesis and the presented materials**
   The presented dissertation consists of an introduction, 7 chapters, development and conclusion, author reference and contributions, bibliography. The results of Bulgarian students in both national and international assessments confirm the relevance of the topic.
2. **Short CV and personal impressions of the candidate**
   Ralitsa Stamenkova has a master's degree from Sofia University "St. Kliment Ohridski". She worked as a programmer and technical director in various organizations, as a teacher and methodological leader in a training center, as a part-time teacher at Sofia University "St. Kliment Ohridski". My personal impressions of Ralitza Stamenkova are from her participation in a scientific forum.
3. **Content analysis of the scientific and applied achievements of the candidate, contained in the presented PhD thesis and the publications to it, included in the procedure**
   Ralitsa Stamenkova knows the scientific problem.

Consideration of the mathematical essay as a tool in mathematics education and its added value, as well as the criteria and indicators for evaluating student results, deserve attention. The results of the comparative analysis of the variety and amount of applied tasks in the mathematics training course in our country and in several foreign systems, as well as the sample applied tasks supplementing the mathematics training course, are useful.

A preliminary experiment was conducted with students from the First Private Mathematical High School, the International School at the Embassy of Germany in Sofia, Uvekind, Italian Lyceum, with the aim of refining the wording of the tasks. A pedagogical experiment was conducted with students from the Sofia Mathematical High School and the German Language High School to test some of the hypotheses. The impact of the pandemic situation due to COVID-19 on the organization of the experiment and expansion with an unplanned element related to digitalization is described.

I accept the described scientific and applied scientific contributions.

4. Approbation of the results

Five participations with sectional reports are indicated, it is not reflected which are the events. In one of her participations - in the National Seminar on Mathematics Education at IMI-BAS in 2019, Ralitza Stamenkova received an award.

Three individual publications are presented. Scientific works meet the minimum national requirements and the additional requirements of SU "St. Kliment Ohridski" for the acquisition of an educational and scientific degree "doctor" in the scientific field and professional field of the procedure.

The results presented by the candidate in the dissertation thesis and related scientific works do not repeat those from previous procedures for acquiring a scientific title and academic position. There is no proven plagiarism in the submitted dissertation and scientific works under this procedure.

5. Qualities of the abstract

The abstract correctly presents the results and content of the dissertation thesis.

6. Critical notes and recommendations

I recommend ensuring a wide dissemination of the results, in connection with the need to carry out activities to improve the functional literacy of students. I recommend

continuing the research with an emphasis on the use of computer models in setting and solving applied problems.

7. Conclusion

Having familiarized myself with the dissertation thesis presented in the procedure and the scientific works accompanying it and based on the analysis of their significance and the scientific and applied scientific contributions contained in them, I **confirm** that the presented PhD thesis and the scientific publications to it, as well as the quality and originality of the results and achievements presented in them, meet the requirements of the Act on Development of the Academic Staff in the Republic of Bulgaria, the Rules for its Implementation and the corresponding Rules at the Sofia University "St. Kliment Ohridski" (FMI-SU) for acquisition by the candidate of educational and scientific degree "Doctor" in the Scientific field 1. Pedagogical sciences and professional field 1.3. Pedagogy of learning in ..., In particular, the candidate satisfies the minimum national requirements in the professional field and no plagiarism has been found in the scientific works submitted to the competition.

Based on the above, I **recommend** the scientific jury to award Ralitza Stamenkova the educational and scientific degree "doctor" in the Scientific field 1. Pedagogical sciences, professional field 1.3. Pedagogy of learning in ...

05.03.2024 Prepared the statement: …….

(Prof. Dr. Toni Chehlarova)