MATH EDUCATION IN RUSSIA
2009-2016

A SURVEY AND PERSPECTIVES

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Background

• A strong common general math education without connection to modern real life and educational request of students and country’s needs
• Compulsory secondary school with no variety, diversity, with weak and rare specialization in high grades
• Education runs formally without referring to what is really learnt and what is just passed by
• Common graduation exams provided in schools. The results are the main indicators of ‘school achievements’. Low and decreasing prestige of technical and math education
• Unified State Exam (USE) made as a mechanical adaptation of CITO technique to traditional content and common curricula
Steps

- **2004.** First educational standard with a weak attempt to formulate new features was written in Roman and Italic. An idea of two levels in education was ‘dashed’. The probability and statistics were mentioned.

- **2008-2012.** New editions of the standard (new generation). FES’08/12 doesn’t content curriculum. The PT&S are announced as a part of school math course.

- **2009.** Under new standard the design of curricula was delegated to schools

- **2009.** New model of USE on math. Clear practice-oriented part and total refutation of multiply choice items. Shorter but with rapid ascend of difficulties. It revealed and sharpened all problems accumulated from old years.
The Concept

• **2013 Dec.** After long discussions The Development Concept was worked out and approved by the government. Six pages with two main ideas about school math education:

1. Students are different (most revolutionary point)
2. Math for them might be different also. Three levels are allocated:
   • Basic (Math for life)
   • General (math for profession, whatever this means)
   • Creative (math for future mathematicians and researchers)
Two-levelled USE

• **2015.** Based on the Concept the USE runs in basic and advanced levels. The problem of students with non-math request in their life was successfully (or merely satisfactorily) solved.

• New problems have immediately arisen.
Curricula

• The new standard doesn’t include curricula. What does?
• Due to the Concept and corresponding changes in educational lawmaking it became possible to make not one general curriculum but a pack of different exemplary ones for junior (5-9) and high (10-11) grades.

• **2015.** Exemplary Curriculum for JS: two levels – basic and applied with two sublevels of the last. PT and S makes a special chapter with enumerating all didactic units.

• **2016.** Exemplary Curriculum for HS: three levels – basic (with two sublevels including a compensating one), applied and creative with an extension
Textbooks

• Very traditional
• Don’t meet new content (practically oriented tasks, financial literacy, multilevel curricula)
• Government has put a task to develop new textbooks in short terms.
Specialized math education

• One of most important things in the Concept is an idea that elite math education and popularization must be a part of state policy.
• Within last 5 years in Russia we got more than 100 new math educational centers, lot of summer and winter schools.