Record Nr. UNINA9910816877003321 Russian mathematics education: programs and practices // edited by **Titolo** Alexander Karp, Bruce R. Vogeli Pubbl/distr/stampa Singapore,: World Scientific, 2011 **ISBN** 1-283-23473-4 9786613234735 981-4322-71-7 Edizione [1st ed.] Descrizione fisica 1 online resource (514 p.) Collana Series on mathematics education;; v. 5 Altri autori (Persone) KarpAlexander VogeliBruce R (Bruce Ramon) Disciplina 510.71047 Mathematics - Study and teaching - Russia Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and indexes. Nota di bibliografia Nota di contenuto Contents; Introduction; Chapter 1. On the Mathematics Lesson Alexander Karp and Leonid Zvavich; 1 Introduction; 2 Who Participates in the Class and Where Classes Are Conducted: Background: 2.1 Teachers and Students; 2.2 The Mathematics Classroom and Its Layout; 3 Certain Issues in Class Instruction Methodology: 3.1 On the History of

the Development of Class Instruction Methodology in Russia; 3.2 Types of Lessons and Lesson Planning; 4 Problem Solving in Mathematics Classes; 5 Epilogue: Bad Lessons, and What One Would Like to Hope for: References

Chapter 2. The History and the Present State of Elementary Mathematical Education in Russia Olga Ivashova1 Introduction; 2 The History of Arithmetical Education in Russia During the 10th-18th Centuries; 3 Elementary Mathematical Education in Russia in the 19th and Early 20th Centuries (through 1917); 3.1 The Method of Learning Operations; 3.2 The Monographical Method of Learning the Numbers; 3.3 On Some Pre-Revolution Handbooks for the Elementary School; 4 Elementary Education in the Complex Programs of Soviet Russia, 1918-1932

5 The Study of Arithmetic in the Soviet Elementary School, 1932-1969 6 The Elementary Course in Mathematics in the Soviet School, 1969-1990's; 7 Elementary Mathematical Education in Russia, 1990's; 7.1

Fundamental Program Requirements and Characteristics of Contemporary Textbooks; 7.2 The Content of the Elementary Course in Mathematics; 7.2.1 Numbers and arithmetical operations; 7.2.2 Arithmetical problems; 7.2.3 Magnitudes; 7.2.4 Geometrical content; 7.2.5 Elements of algebra; 7.2.6 Elements of combinatorics; 7.2.7 Elements of logic, set theory, modeling; 7.2.8 Working with data; 8 Conclusion

References Chapter 3. On the Teaching of Geometry in Russia Alexander Karp and Alexey Werner; 1 Introduction; 2 The Contents of the Course in Geometry in Russian Schools; 3 The Aims and Characteristics of the Course in Geometry in Russia; 4 On the Conditions Under Which Geometry Is Taught; 5 Toward a History of the Course in Geometry in Russia (USSR); 5.1 From Kiselev to Kolmogorov; 5.2 Kolmogorov's Textbooks for Basic Schools; 5.3 Geometry Textbooks for Basic Schools from the Late 1970's to the 1980's; 5.3.1 A. V. Pogorelov's geometry textbook

5.3.2 The geometry textbooks of L. S. Atanasyan and his coauthors 5.3.3 The textbooks of A. D. Alexandrov and his coauthors; 5.4 Textbooks That Appeared After the Collapse of the USSR; 5.4.1 I. F. Sharygin's textbooks; 5.4.2 The textbooks of I. M. Smirnova and V. A. Smirnov; 5.4.3 The textbooks of A. L. Werner and his coauthors; 6 Concerning Some Problems with the Course in Geometry in Russia in Recent Decades; 6.1 The Problem of the Rigor of the Course in Geometry; 6.2 Visual and Informal Geometry in the Study of Three-dimensional Geometry in Basic Schools

6.3 The New and the Old in the Teaching of Geometry

Sommario/riassunto

This anthology, consisting of two volumes, is intended to equip background researchers, practitioners and students of international mathematics education with intimate knowledge of mathematics education in Russia. Volume I, entitled Russian Mathematics Ed