
MARIYA BOYKO, University of Toronto

The changing image of mathematics in Soviet textbooks in the 1960's and 1970's

At the end of the 1950's the Soviet government led by Nikita Khrushchev conducted a reform of education in order to bridge the gap that then existed between the school curriculum and the practical needs of the state. Although prominent mathematicians and educators (led by distinguished mathematician Prof. Andrei Kolmogorov) were involved in re-writing the mathematics curriculum, the reform was deemed ineffective by the end of the 1970's. Counter-reformers criticized the emphasis on topics which required a high level of mathematical maturity – such as set theory and a deductive logical approach. They maintained that the failure of the reforms was a result of the reformers' misunderstanding of the requirements of the government and miscommunication with school teachers. However, the reformers themselves held that they had acted in consultation with school teachers and considered their opinions and needs. The reformers were strongly influenced by changes in research mathematics rather than by the changes in teaching methodologies that the community of educators were calling for. While the latter were primarily interested in practical applications of mathematics, the cohesiveness of the curriculum and the consistency of teaching methods, the reformers focused on modifying the existing curriculum in accordance with the new standards of rigor and abstraction dictated by professional trends in modern mathematics. The image of mathematics was changing and the reformers were attempting to reflect this change in education. We will use excerpts and problems from the Soviet textbooks written in the 1950's to the 1970's to illustrate this change.