**How much mathematics is required in general education?**

An introductory remark on five book reviews

In October 1995, the opinion was voiced in the German press and media that seven years of mathematics education at school is enough. The turmoil that followed a press release of the Deutsche Presse-Agentur (dpa) relating to the habilitation thesis of Hans Werner Heymann, Bielefeld, had been triggered by the headline of the dpa news item: "Seven years of mathematics education is enough for most people". Many local newspapers printed this statement with only minor changes. It prompted numerous letters to editors, commentaries and interviews in supra-regional newspapers and weekly magazines. Depending on the position held by the commentators, reactions were as follows: "Too much mathematics is nonsense", "Does mathematics spell general education?", or "The cumbersome seven years". [1] investigates in greater detail the facts behind all this uproar in the media and the associated misinterpretations. Furthermore, the article looks, for one thing, at how mathematics education is viewed by the public and, for another, at relations between the academic disciplines of mathematics, mathematics didactics and pedagogics and at the reasons for their having difficulty in pulling together in the reform of mathematics education.

Hans Werner Heymann's habilitation thesis [2] has been in the German bookshops since April 1996. It is mainly a work of educational theory. The author discusses extensively what should nowadays be the benefit of general education provided by schools. Within this context, he investigates the following question: is the complete traditional mathematics syllabus for secondary education necessary under general education aspects, or could and ought some of what is now deemed standard knowledge be removed from the syllabus for part of the pupils, in favour of a deeper understanding and greater closeness to practice?

Hans Werner Heymann's thesis addresses a subject that has long been neglected by pedagogues and mathematics didacticians. His objective is to justify and modify mathematics education in relation to a modern concept of...
general education. He argues that mathematics, like any other subject at general schools, must face the question of how much it contributes to pupils’ general education. One need not agree to Heymann’s suggestions for reorganizing education; however, one should consider the main concern of his publication: It attempts a definition of what general school education and general mathematics education is. His criticism and his proposals need, and deserve, to be discussed. To this the following pages are dedicated.

Moreover, the question of what mathematics students should know and be able to do is so complex that it demands different discussion contributions. Five authors discuss Heymann’s work from different standpoints — as a theoretical educationalist, mathematician, teacher, or mathematics didactician — and attempt to answer its question from their points of view.

References

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