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Rethinking mathematical concepts with the lens of the history of mathematics: an experiment with prospective secondary teachers.

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Summary: In this paper we present the main lines of a course on the history of mathematics for prospective secondary school (students' age range 14–19) mathematics teachers, enrolled on a 2-year postgraduate teacher preparation program. In order to integrate the historical objectives with the educational objectives of the program we adopted the following strategy: on the one hand we focused on some important concepts taught in upper secondary school that required the prospective teachers to reflect on the difficulties linked to these concepts; on the other hand we proposed original sources intended to enhance the students' reflection through challenging some existing beliefs on these concepts. We informed the prospective teachers that they were participating in a research project. This fostered a collaborative atmosphere and an active involvement that guided our students towards the final step of the course, where they were requested to outline a teaching sequence for presenting the concepts in the classroom.

Classification: D39 A30

Keywords: mathematical concepts; history of mathematics; pre-service teachers; teacher education

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