



## The efficiency of written final exam questions in mathematics based on voluntary data reports, 2012–2015

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*Abstract.* The efficiency of each question in the mathematics written final exam is not recorded by the institutions organizing the graduation exam. In order to overcome this deficiency the committee of final exams in mathematics and the Hungarian Educational Authority ask schools to send – beyond the total marks obtained on the paper – the scores of each question of all individual candidates to the Authority every year since 2012. Because a high proportion of schools complied with this request between 2012 and 2015, the researchers were provided valuable information for a deeper analysis on the effectiveness of exams. In this paper we have carried out an analysis of the efficiency of questions set in the written examination papers both on the intermediate and on the higher level in the last four years, on the basis of these voluntary data reports.

*Key words and phrases:* final exam results in mathematics, analysis of the efficiency of problems, efficiency of different topics.

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