



Number theory vs. Hungarian highschool textbooks: $\sqrt{2}$ is irrational

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Abstract. According to the Hungarian National Curriculum the proof of the irrationality of $\sqrt{2}$ is considered in grade 10. We analyze the standard proofs from the textbooks and give some mathematical arguments that those reasonings are neither appropriate nor sufficient. We suggest that the proof should involve the fundamental theorem of arithmetic.

Key words and phrases: proof, key steps, analogy, proof-theory.

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