MATHEMATICS AND PROGRAMMING IN TEACHING NUMBER THEORY

Zsanett Szabó, dr. László Zsakó, HU

Abstract: Programming and mathematics are closely linked, as both have a strong role for problem-solving thinking and different algorithms. There are many skills that are relevant to both mathematics and programming. There are some that can be learned in either subject, but there are also some that are more easily learned in mathematics (e.g. taking roots) and vice versa, there are some that are easier to visualize and teach in computer science.
Given the interdependence of the subjects, it is worth looking at the topics that are covered in both programming and mathematics lessons in terms of sequencing. In this article, the topic of number theory is examined from the perspectives of the sequencing and content. Number theory is relatively important at the beginning of teaching programing for multiple reasons, the first of which is its reliability in the teaching of loop types. It can also be used to set a wide range of easy-to-think-through tasks that are easy to illustrate using elementary tools. In addition, programming competitions tend to frequently include tasks based on number theory. Regardless of whether we are talking about tasks performed on a computer or without one (Szabó, 2018; Nikházy, 2019).

Keywords: number theory, programming, mathematics, divison

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Contact address

Zsanett Szabó, PhD student.
Faculty of Informatics, Eötvös Loránd University, H-1117, Budapest, Pázmány Péter sétány 1/C, Hungary
ELTE Trefort Ágoston High School, H-1088, Budapest, Trefort u. 8., Hungary
email: szabo.zsanett@inf.elte.hu