

Different Types of Locus Dependencies in Solving Geometry Construction Problems

Vesna Marinković¹[0000–0003–0526–899X] Tijana Šukilović¹[0000–0001–6371–3081]

Filip Marić¹[0000–0001–7219–6960]

Abstract. Over the centuries, geometric construction problems have received significant attention. Although many of these problems can be solved using only a ruler and a compass, there are some that cannot. Relatively little effort has been devoted to identifying construction problems that have an obstruction to their solution. This paper focuses on locus-dependent problems – problems where the required figure exists only under specific constraints on the given elements. We explore various types of locus dependencies encountered in geometric constructions and propose automated procedures to solve these types of problem.

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