

The speed of origami constructions versus other construction tools

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One of the ancient problems in geometry was to know which numbers were constructible using tools like a compass, a ruler and a compass, conic sections or origami. This problem has been solved for the mentioned tools using field theory.

But, if a number is constructible with more than one tool, which tool is faster? In this work, we will define magnitudes that will characterize different aspects of the construction of a number. We will also give explicit optimal constructions of some constructible numbers using different tools and compare their constructions, from both a geometrical and an arithmetical point of view.