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An algorithmic approach to the notion of an elementary function

An elementary function is one of the basics notion of precalculus and calculus courses. But many calculus books do not include the definition or are abounded with many errors, connected with the idea of an elementary function. The analysis of these errors could be found in [1]. But the suggested correct definition of an elementary function is too complicated for teaching to beginners. We offer a new rigorous and understandable to students approach to the notion of an elementary function based on the teaching to beginners. We offer a new rigorous and understandable to students approach to the notion of an elementary function based on the concept of linear algorithm. Part of these results is a joint work with I. Subbotin.

Reference: B. P. Pygachov, On some error in calculus manuals, Uspehi. Math. Nayk., 19 (1964), 5, 234.