# Solving Special Functional Equations with CAS

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**Abstract**

In articles [4, 5, 6, 7] was studied solutions of one variable functional equations in form

$$F(f \circ g_1(x), \ldots, f \circ g_k(x)) = h(x)\,,$$

where the inner functions $g_1, \ldots, g_n$ form or generate a finite group of functions mapping some $H \subset \mathbb{R}$ to the real line. Here the group operation is the function composition. In this presentation we investigating how can we solve these type of equations using Computer Algebra Systems.

*Keywords:* Functional equations, computer algebra, SAGE, finite groups.

*MSC:* Primary 39B22; Secondary 3904, 26B10, 26B12.

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