

# Some classical paradoxes of Infinity revisited

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## **Abstract**

In this talk, some classical paradoxes of infinity are considered. It is shown that the counting system of an Amazonian tribe, Pirahã, working with only three numerals (one, two, many) can help us to change our perception of these paradoxes. A recently introduced methodology allowing one to work with finite, infinite, and infinitesimal numbers in a unique computational framework not only theoretically but also numerically is considered. It is mentioned that it is actively used nowadays in numerous applications in pure and applied mathematics and computer science, among them ODEs. It is shown that this methodology allows one to study the paradoxes in a new constructive light and to switch from qualitative considerations of paradoxes to their quantitative analysis.

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