Mittwoch, 28.5.2025 16:15-17:15 Uhr in M/E29

One, Two, Many

(or a dozen reasons why mathematics isn't as easy as 1,2,3)

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Abstract

Are there really primitive tribes whose system of counting goes: "One, Two, Many,..." indicating that from three on it's more or less a blur?

Maybe we modern humans are such a tribe. Despite the sophistication we see in ourselves compared with our less advanced ancestors from times long past, it's surprising how little progress we've made in addressing some basic problems in 3D or beyond, or when solving seemingly simple equations in \geq 3 variables. While our accomplishments include astonishing mastery of some ABCs, such as Air (flight, weather prediction), Biology (medical breakthroughs, DNA) and Communications



(phone, video, email), we often struggle to get past 1, 2, 3, in other domains. Or sometimes even to get to 3.

We'll survey a dozen fun topics in shapes and numbers and patterns whose basics and generalisations can be explored with little mathematical background, and which speedily lead to "what if?" questions ranging from easy to tricky to "we just don't know." Fruit, cakes, doughnuts, bagels, coins, boxes, cubes, primes, squares, and sums involving powers will all make appearances.

Occasionally, we will stray into deeper waters and touch on more sophisticated topics. (At the end we mention some advanced forays into modern maths.)