

Universität zu Köln

Mathematisch- Naturwissenschaftliche Fakultät
Seminar für Mathematik und ihre Didaktik

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Teaching for Mathematical Sense-Making

Abstract:

Part of what I love about mathematics is how beautifully it fits together – that when you think about it in the right ways, the concepts and procedures we teach all make sense, and the formal mathematics brings it all together. From my perspective, the goal of teaching mathematically is to help students to learn to think mathematically, to see math as a sense-making enterprise.

In this talk I will give some examples of how mathematics can be viewed as a form of sense-making, and of what happens when it is not. I'll give examples of trends in the U.S. that will, I hope, support the kinds of teaching we want to do, in helping students become better mathematical thinkers. I will discuss some lessons we have been building, which help to focus on student thinking and build productively on it; and I will discuss a framework we have been developing for focusing on productive behaviors in mathematics classrooms.