Why are Number Lines Hard for Elementary Teachers?

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Abstract: Many mathematicians, myself included, believe that number lines are of obvious conceptual importance in understanding basic mathematics. In years of working with elementary and middle school teachers, I have observed that number lines are underutilized in classrooms, or utilized in awkward and unhelpful ways. What makes number lines difficult for teachers and students? I will describe a number of issues, some of which continue up into calculus classes and beyond, and also some plans for further research.