1145-J1-328   **Erin R Moss*** (`erin.moss@millersville.edu`). *A Physical Number Line as a Support for Students' Work with Absolute Value Equations and Inequalities.*

Absolute value equations and inequalities pose significant challenges to college algebra instructors and students alike. Despite instructors' best efforts to help students make sense of these problems, reflection on assessment results reveals that students often manipulate symbols with no knowledge of their meaning. In this talk, I share a powerful representation of a physical number line that supports students' understanding of how the absolute value of an expression can be interpreted when it is part of an equation or inequality. The number line itself is a long piece of twine from which we can hang index cards representing numbers and variable expressions. Students place numerous cards on the number line to represent all the possible solutions to the given equations and inequalities once absolute value is interpreted as a distance from zero. The physical and visual representation students have created then allows them to make further progress towards algebraic and graphical solutions to these problems. (Received September 01, 2018)

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