



The Power of Problem Solving

The Editorial Panel of *Mathematics Teaching in the Middle School (MTMS)* is seeking articles that discuss or exemplify the role of problem solving in the middle grades. The importance of this call for manuscripts is reflected in NCTM's *Principles and Standards for School Mathematics*:

Solving problems is not only a goal of learning mathematics but also a major means of doing so. Students should have frequent opportunities to formulate, grapple with, and solve complex problems that require a significant amount of effort. . . . Problem solving is an integral part of all mathematics learning, and so it should not be an isolated part of the mathematics program.

(NCTM 2000, p. 52)

NCTM's focus on problem solving was emphasized again in *Principles to Actions: Ensuring Mathematical Success for All* when stating that "Effective teaching of mathematics engages students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies" (NCTM 2014, p. 10).

Teachers can engage students in problem solving through the use of tasks that invoke reasoning, contain multiple entry points, and encourage a classroom culture conducive to communication and collaboration. Although the tenets of the Content Standards may be a driving force for much of the instruction in

a classroom, a problem-solving approach that promotes multiple representations, a variety of strategies, and connections between and among mathematical concepts and real-world contexts can be the means by which the work is accomplished.

The Editorial Panel of *Mathematics Teaching in the Middle School (MTMS)* encourages readers to submit manuscripts addressing how different aspects of problem solving are implemented in the mathematics classroom. These questions may guide your thought processes as you develop your ideas:

- How is problem solving promoted in the classroom?
- How can each and every student be regularly engaged in problem solving?
- What is the nature of a task that will engage students in meaningful problem solving?
- How can we teach students to reflect on their own problem-solving processes and mathematical results?
- How do we assess or evaluate students' abilities to problem solve?
- How can we help stakeholders—teachers, parents, curriculum authors, administrators—understand what it means for students to engage in meaningful problem solving?
- How do we address challenges that arise for students as they engage in the problem-solving process?
- How does a teacher integrate reasoning and sense making with the mathematical practices and mathematical content of the curriculum?
- How can teachers facilitate problem solving in a way that is integral to the mathematical work?

The manuscript should be no more than 2500 words. Upload submissions to this open-ended call for manuscripts at <http://mtms.msubmit.net>. On the Keywords, Categories, Special Sections tab, select this specific call from the list in the Department/Calls section.



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