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**STATEMENT ON *THE NATION'S REPORT CARD:*  
*MATHEMATICS 2009***

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The results of the NAEP Mathematics 2009 Report Card indicate that 8<sup>th</sup>-graders are continuing to improve, while 4<sup>th</sup>-graders' performance remains unchanged since 2007. Based on 34 years of teaching experience in California, New York, Maine, and U.S. Peace Corps service in Malaysia, my first instinct is to say: We have to do a better job at strengthening core skills while challenging our students to become more adept problem solvers.

Mathematics has been a truly encompassing part of my life. As mathematics department chair and 12<sup>th</sup>-grade mathematics teacher, I have worked tirelessly to improve the teaching and learning of mathematics at the local and state levels. I serve as collaborative leader in Maine for the advanced placement calculus BC program because I believe that we must challenge the students of this nation to remain globally competitive.

With collaboration from many partners, I have introduced and fostered access to algebra through a web-based program at the middle school level. I have seen first-hand how exposing students to higher mathematical concepts improves achievement as well as confidence in their abilities. As a member of my district's vertical math team, I align curriculum that includes an online mathematics program that capitalizes on the Maine Laptop Initiative. That initiative has supplied laptop computers to 7<sup>th</sup>- and 8<sup>th</sup>-graders, integrating technology into the classroom. The online math program provides additional exposure to mathematical concepts for students, and it has been beneficial in supporting our literacy initiative as well.

This type of success illustrates the importance of more rigorous math coursework at all grade levels in keeping our students challenged, engaged, and better able to do well in high school and beyond. It is imperative that more school districts across the country build their math programs to emphasize both procedural and conceptual skill mastery at all levels. There's no such thing as reaching for success too early.

One of the big education stories from last year was California's push to make algebra mandatory at grade 8. This strategy can result in keeping students' skills competitive and marketable in a workforce and economy that is becoming more global by the minute.

Background variable data from this Report Card supports the benefits of algebra exposure at that grade level. In 2009, 8<sup>th</sup>-graders nationally whose classrooms included moderate to heavy emphasis on algebra and related functions performed 15 points higher than their peers whose classrooms included little to no emphasis on this. Additionally, schools that enrolled 11 to 90 percent of their 8<sup>th</sup>-graders in a standard Algebra 1 course saw them earn scores that were 7 to 15 points higher than students who attended schools where no 8<sup>th</sup>-grader was enrolled in Algebra 1.

This boost in achievement was also seen at the elementary-school level. In 2009, 4<sup>th</sup>-graders nationally who had moderate or heavy exposure to geometry earned scores that were 6 points higher on the geometry portion of the NAEP assessment than 4<sup>th</sup>-grade students who had little to no emphasis on geometry.

Early exposure to challenging material isn't only about tackling difficult material. It's also about maintaining a foundation of basic skills. When students don't have the fundamentals, they're lost.

The NAEP results for 4<sup>th</sup> grade are particularly discouraging when you consider that their performance on international assessments for the past 13 years has been pretty stellar. That suggests that many of our students have the potential to do well, and we must exercise that potential to our best abilities.

Some communities, including mine in Maine, have been demanding that middle schools become more academic. We need to abandon the fear that some kids may feel bad about themselves if they receive challenging material that they might not grasp immediately. School districts must be encouraged to provide intervention and support in order to stop the slide of academic skills in the K-12 continuum of learning.

As it is now, you often hear college officials complaining to the high school officials that entering college freshmen are lacking some of the academic fundamentals. In turn, you have the high school officials telling the middle-school folks that the entering high school freshmen aren't as prepared as they should be. And so forth.

High student achievement and sufficient preparation in mathematics must be a priority at every grade level. The ideal is that at each step of the way, we are doing what we can to prepare those students for the next grade, and ultimately the next phase of their lives. Thank you.