

August 31, 2011

The Association of State Supervisors of Mathematics (ASSM), an organization of mathematics supervisors from State Departments of Education, is pleased to provide comments on the PARCC Draft Model Content Frameworks for Mathematics for your consideration. These comments reflect submissions from ASSM members and the ASSM Board of Directors.

ASSM recognizes the importance of this work and appreciates the efforts of those involved with developing the Common Core State Standards for Mathematics (CCSSM) and the PARCC Draft Model Content Frameworks. We urge the consortium to continue to include K-12 classroom teachers and state mathematics leaders in the revision process for the content frameworks and the continued development of the assessment frameworks. We also urge the PARCC and SBAC consortia to continue to dialogue and collaborate regarding essential elements of the respective assessment frameworks.

### Fluency

- The use of the word **fluency** in the PARCC framework seems to narrow the intentions of the CCSSM. Defining fluency as ‘fast and accurate’ appears to contradict the intent of the CCSSM’s use of the *Adding It Up* (National Research Council) definition of fluency as flexible, accurate, efficient, and appropriate. There is a concern that defining fluency in terms of speed (fast) will result in a large percentage of classroom and intervention time focused on rote memorization of facts and procedures. We agree that fluency is important in mathematics as stated in the CCSSM, and noted on page 2 of the document (*“It is important to provide the conceptual building blocks that develop understanding in tandem with skill along the way to fluency; the roots of this conceptual understanding often extend one or more grades earlier in the standards than the grade when fluency is finally expected.”*). However, the *Model Content Frameworks for Mathematics* does not appear to accurately reflect the NRC definition of procedural fluency nor does it reflect the spirit of the CCSSM which strives to balance fluency with conceptual understanding. As one of our members noted, “Why not try to assess fluency where it is needed, rather than as a goal of its own?”

### Prioritizing Standards

- There should be two priority categories instead of three. Although focusing instructional attention at the domain and cluster level is necessary, there is a serious concern that parsing the standards into three categories of prioritization may point toward a narrowing of the CCSSM and a neglect of any standards that are relegated to priority level three. In spite of explicitly stating that “Prioritization does not imply neglect of material,” as teachers and curriculum leaders prioritize instructional time, there is a potential to omit third priority areas. The end goal needs to be maintaining the intent of the CCSSM. We are also very concerned that so much of the geometry and statistics content appears to be relegated to the third priority.

### Standards for Mathematical Practice

- The section at each grade level *Examples of Connecting Mathematical Content and Mathematical Practices* is also a concern, particularly at the K-8 level. The Standards for Mathematical Practice do not seem well represented at each grade level. The examples could lead to the interpretation that only some of the math practices will be assessed and thus, only some should be taught at each grade level. We are also concerned that the examples relating to

choosing an appropriate tool focus primarily on the use of technology. This suggests that a tool is being narrowly interpreted as technology or a concrete item rather than the broader idea that the strategies, methods, algorithms we use in math are also tools. Arizona has a good model to show what the practices may look like at each grade level. The Content Framework should reflect the fact that all practices are central to mathematics learning at every grade level. Further, PARCC should use this opportunity to send a strong and clear message that it is a high priority to ensure that the mathematical practices are thoroughly assessed so that they are elevated in importance for the field.

### **Additional Comments**

The following comments were submitted by ASSM members:

- It was suggested that a list of standards be developed for each of the high school pathways. A list of standards for each high school course is a necessity for states and districts trying to plan courses designed to align with the PARCC assessments.
- The PARCC Model Curriculum Frameworks could be strengthened by focusing on aspects such as: a robust theory of action tied to claims and evidence; integrated information on design features, item types, and depth of knowledge specifications; and starting points for accessibility considerations. Developing these aspects will provide discussion points and guidance for mathematics leaders at the school, district, and state levels.

Respectfully submitted on behalf of ASSM:



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