

A – Breakout Sessions

These breakout sessions are designed to obtain input from Forum participants regarding issues that will inform the MET2 project whose goal is to produce a document that updates *The Mathematical Education of Teachers*.

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What Mathematics do Teachers
“Need to Know”
(and)
How (and When) Should They
“Come to Know” that Mathematics?

Eight drafts discuss the Common Core
and the mathematics teachers need to know

- Each draft report has three sections:
- **The work of teaching**
- **Key understandings to support this work**
- **Illustrative examples**

Eight drafts discuss the Common Core and the mathematics teachers need to know

- *Is the draft understandable and is the level of description appropriate?*
- *If challenged to identify the mathematics that it is most important for a teacher to know or be able to do in order to teach this content domain at the appropriate grade level, what would be on your “top five” list?*
- *What mathematics must be a part of initial certification and what can optional, left either to be learned as part of a teacher’s participation in professional or as topics studied by preservice teachers who go beyond minimum requirements for certification?*

The message from statistics educators is that the current probability-statistics course in the mathematics major falls well short of what future high school mathematics teachers need.

(draft) Recommendations

*2. Coursework that allows time to engage in reasoning, explaining, and making sense of the mathematics that prospective teachers will **initially teach** is needed to produce well-started beginning teachers. Although the quality of mathematical preparation is more important than the quantity, we offer the following recommendations for the amount of mathematics coursework for prospective teachers.*

(iii) Prospective high school teachers of mathematics should be required to complete the equivalent of an undergraduate major in mathematics that includes three courses with a primary focus on high school mathematics from an advanced viewpoint.

(draft) Recommendations

7. *Throughout their careers, teachers need opportunities for continued professional growth that include opportunities to learn mathematics on the job, through informal teacher driven initiatives, and as part of graduate education.*
9. *The mathematics community should support raising the standards of professionalism for teachers.*
10. *In grades 5-8 mathematics should be taught by teachers whose preparation and knowledge base meets the standards outlined in this document for middle grade teachers. General preparation as an elementary teacher is not sufficient.*