



Mathematical Association of America

The largest professional association that focuses on college-level mathematics, dealing with

- Education
- Research
- Professional Development
- Public Policy
- Public Appreciation

PowerPoint available at
www.macalester.edu/~bressoud/talks

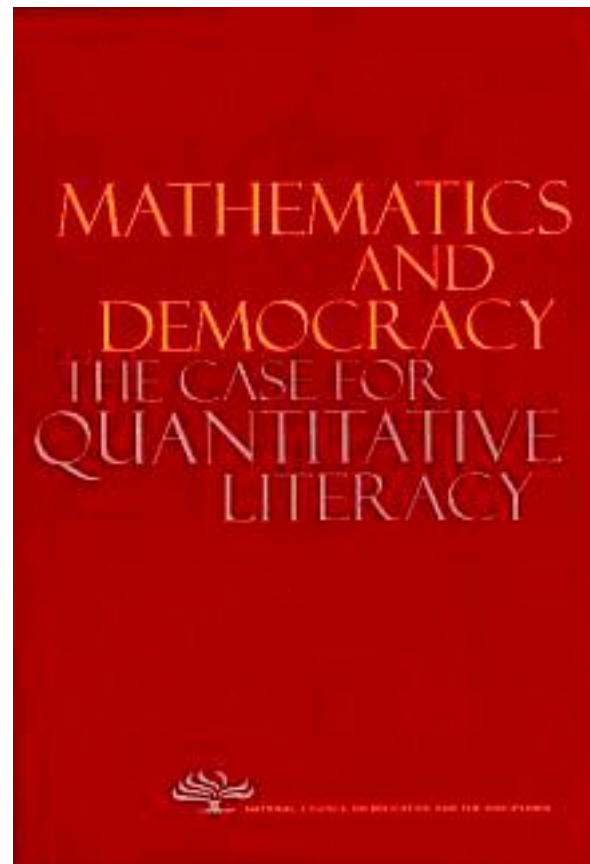


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What “mathematical” knowledge do all students need?

Lynn Steen, editor
National Council for Education and the
Disciplines

[www.maa.org/ql/
mathanddemocracy.html](http://www.maa.org/ql/mathanddemocracy.html)





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Macalester College's answer: The ability to

- Describe the world quantitatively,
- Evaluate sources and quality of data,
- Distinguish association from causation,
- Understand trade-offs,
- Understand uncertainty and risk, and
- Use estimation and modeling to evaluate claims and test theories

How do we know when a student can do these?



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CUPM Curriculum Guide: 2004

Since 1953, at roughly 10-year intervals, the Committee on Undergraduate Program in Mathematics has produced recommendations on the undergraduate curriculum in mathematics.

www.maa.org/cupm



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CUPM Curriculum Guide: 2004

Recommendation 2: *Every* course should incorporate activities that will help all students progress in developing analytical, critical reasoning, problem-solving, and communication skills and acquiring mathematical habits of mind.

www.maa.org/cupm



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*Curriculum
Foundations Project:
Voices of the Partner
Disciplines*

Biology: “Statistics, modeling and graphical representation should take priority over calculus.”

www.maa.org/cupm/crafty



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*Curriculum
Foundations Project:
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Mathematics: The most important task of the first two years is to move students from a procedural/computational understanding of mathematics to a broad understanding encompassing logical reasoning, generalization, abstraction, and formal proof.

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