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(This is an outline of a talk on math across the curriculum. The PowerPoint handouts that illustrated the talk accompany this document.)

Axiom: Training in math provides not only quantitative literacy, but also develops logical thinking and reasoning skills. Evidence: Students who score well on math placement tests do well in their studies across the board. (“The math placement score is the single best predictor of success in college.”)

Because secondary school preparation is so poor, we need to do a all-out assault on math deficiencies as we do with writing.

The first wave of this assault has already been launched: QL (quantitative literacy) across the curriculum programs are already underway at numerous schools across the country. These programs help instructors in all disciplines to insert quantitative problems appropriate to their disciplines into their course materials.

We need to learn from the early adopters in the QL program what works, what

doesn’t, and why—and apply the program in our own schools.

However, the QL across the Curriculum program is just the first prong of what should be a two-pronged assault. The second prong should be a major effort to beef up our requirements in terms of the kinds of courses that train students in abstract and logical reasoning, and in symbolic thinking. Primary among such courses is probably algebra—but some other courses that have been shown to enhance these reasoning skills include physics and computer programming.

Our goal should be to ensure that the General Education core includes enough algebra (perhaps the equivalent of two years of high school algebra and a year of college algebra, although we should arrive at the specifics via discussion and debate), and that this training occurs very early in the college academic sequence.