

1056-Z1-356

**Padraig M. McLoughlin\*** (mcloughl@kutztown.edu), 265 Lytle Hall, Dept. of Mathematics, Kutztown University of Pennsylvania, Kutztown, PA 19530. *Is Mathematics Indispensable and Are Pre-requisites Needed in Mathematics Courses?*

We argue "Is Mathematics Indispensable & Are Pre-requisites Needed in Mathematics Courses?" that the answer to one question is, 'yes,' and to the other, 'no;' however, the responses to the questions are inverted. The questions were posed in two papers, "Do We Need Pre-requisites" (O'Shea & Pollatsek, 1997) and "Is Mathematics Necessary" (Dudley, 1997), which the author has read (seemingly) every year and has provoked much reflection. The answers to the questions will lead to a discussion of the 2004 CUPM Recommendations. We organise the paper such that we first review the literature and offer a synopsis of the major points that are addressed in the paper. Then, we argue the main points: we need pre-requisites in mathematics courses; but, mathematics is not a necessary are of academia for all students. We continue by discussing CUPM Recommendations and their relationship to the questions. We argue that learning requires doing; only through inquiry is learning achieved, and mathematical thought is one that must be focused on the process of deriving a proof, constructing a solution to a problem, or providing connection between and betwixt the two. Finally, we opine that some of the recommendations are flawed and might need revision for the next set of CUPM Standards. (Received September 01, 2009)