1021-97-16 **Dale J Winter*** (amanitav@umich.edu), Department of Mathematics, University of Michigan, 530 Church Street, Ann Arbor, MI 48109. *Effects of highly contextualized learning activities on students' mathematical and non-mathematical recall.*

Many claims have been made concerning the advantages of embedding mathematical problems in "real world" contexts. One specific claim is that learning mathematics by solving such problems may enhance students' recall of mathematical concepts and procedures (Blumberg et al., 2005; Taylor, 2001). This report describes the results of a study testing this hypothesis within introductory undergraduate mathematics courses (precalculus and calculus). The study showed that the use of elaborate contexts significantly enhanced students' recall of the context, compared to problems that were embedded in routine contexts. When mathematical concepts or procedures were ones that the students had worked with frequently, the use of elaborate contexts produced no significant gains in students' recall of the mathematics. However, when the concepts or procedures were ones that students had relatively little exposure to in the course, the use of elaborate contexts was associated with significantly enhanced student recall of mathematical concepts and techniques. (Received June 21, 2006)