



The University of
Montana



**DOCTORAL DISSERTATION RESEARCH PROPOSAL
& ORAL COMPREHENSIVE EXAMINATION**

***Reflective Mathematics Activities: A Pathway to the Beliefs of
Pre-service Elementary School Teachers***

by

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Many researchers have identified the important role that beliefs about mathematics play in instructional decision making (e.g., Ernest, 1988; Schoenfeld, 1985). Given the central role that beliefs play in the classroom it follows that an element of pre-service teacher education should concern itself with the development of beliefs that facilitate the learning of mathematics. In this talk, I propose a study of pre-service elementary teachers' beliefs about mathematics by means of reflective mathematical activities. A reflective mathematical activity is an educational task in which a student is given the opportunity to construct a new mathematical concept while reflecting upon what it means to *know* and *learn* mathematics. I will give examples of reflective mathematical activities and propose a means of measuring pre-service teachers' beliefs both quantitatively and qualitatively.

Committee: Bharath Sriraman (chair), Jim Hirstein, Jon Graham, Albert Borgmann (Philosophy), Ke Norman

**Wednesday May 13th, 2009 1.00-2.00 pm in Math 103 [Open to
everyone]**

2.10-3.00 [Oral part of Comprehensive Examination]