There is a growing body of evidence that teacher effectiveness is a function of a very specialized and complex knowledge that goes under various names such as Shulman’s ”pedagogical content knowledge”, Liping Ma’s ”profound understanding of fundamental mathematics”, or more generally, ”mathematics knowledge for teaching”. Creating interesting and effective problems for a college course on elementary mathematics for teachers that instructors can use to evaluate students’ understanding of this knowledge poses special challenges. In this talk we will present some examples of math problems for elementary teachers that illustrate these challenges. We will also describe a newly-created website (iremt.math.msu.edu) that contains problem banks, an online test/assessment generator program, and lesson guides that can be used to help instructors meet these challenges. The website was created as part of a collaborative NSF CCLI grant between Louisiana State University and Michigan State University. (Received September 17, 2008)