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Learning-focused Exam Construction.

In many mathematics courses, traditional timed exams remain the benchmark for assessing student understanding and mastery of the material. Educators realize the need to assess conceptual understanding, communication skills, and the ability to synthesize ideas, yet these goals and outcomes are often at odds with the restrictions imposed by a timed exam environment. In this paper we present an exam and grading structure that focuses on blending traditional problem solving with these higher order thinking skills. In addition we explain how standards and expectations are conveyed to the students via pre-exam read-ahead material about the exam and grading rubric. We also comment on how our system provides valuable feedback to the students, while helping ensure fair grading practices. Finally, we provide a summary of student and faculty feedback on this system of exams and assessment. Handouts with sample exams and grading rubric schemes will be provided. (Received September 27, 2006)