

Mastery Skill Quizzes Make the Difference

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Rationale

- Conceptual understanding comes first.
- As students progress in mathematics, they are expected to be “fluent” in certain skills and algorithms and are expected to recall fundamental properties and definitions.
- Students often come to us with “holes,” despite having passed previous courses.

Mastery Skill Quizzes

- Identify the skills, algorithms, properties, or definitions that are fundamental for success in this course and in the next course(s).
- Write short (5 min) quizzes that assess performance on these skills. Prepare a bank of at least 10 different forms of each quiz. Specify technology.
- Identify the main skill of the quiz. Identify other skills that can mask mastery of the main skill. You may not want to include them.
- You can't test every “type” of problem on a skill quiz. Five minutes; random selection by form.
- Students must pass each skill quiz without error or they fail the course (no matter what their other performance might be.)

Mechanics

- Give new skill quiz at end of class.
- Give two or three retakes at end of class. Retakes also during office hours.
- A skill quiz may be taken only once on a given day.
- Announce the retakes to be given in the next class; have students sign up for retakes they plan to take.
- Regular grade reports are essential.
- Landscape format; two columns.

Advantages

- Students are aware of their current skill level and skill deficits. No magic thinking.
- Early warning of misplacement.
- Students cannot skip skills and still pass.
- Students tend to pay more attention to homework which means they are better prepared to learn in class.
- Excellent for Accreditation; course and program assessment.

Disadvantages

- Faculty workload.
- Stress at end of term.