

**REPORT ON THE MAT-010 FINAL EXAM
ITEM ANALYSIS
Spring 2008**

We are in the process of doing an assessment on the status of our Developmental Mathematics Program. One component of this assessment is to perform an item analysis on the final exams for the developmental mathematics courses (Mat-010, 013 and 014). Instructors were asked to submit their student Scantrons from the final exam in the spring, 2008 semester

We used results from Basic Mathematics students taking the course during the day, in the evening, and on Saturday.

It was found that more than 35% of the students in Mat-010 had difficulty with the following skills on the final exam:

- finding the area and circumference of a circle, given the diameter or radius
- division with integers
- fractional word problems
- multi-step perimeter problem
- changing from words to decimal notation
- operations with mixed numbers
- writing a word name for decimals
- word problems with fractions
- subtraction of integers
- conversions within the metric measurement system
- order of operations with whole numbers and fractions
- proportions with similar triangles
- percent word problems
- conversions within the American system of measurement
- Pythagorean Theorem
- converting a fraction to a decimal
- rounding a decimal
- division by zero

It was found that fewer than 20% of the students in Mat-010 had difficulty with the following skills on the final exam:

- whole number word problems
- dividing fractions
- converting decimals to percents
- finding the volume of a rectangular solid
- place value
- finding mean, median and mode
- subtraction of decimals

- **adding integers**
- **changing a mixed number to an improper fraction**
- **multiplication of whole numbers**

We would like to use this information to help improve our students' performance in the course. The following steps are recommended to all those teaching Mat-010:

- 1. Emphasize these skills during class presentations by spending more time teaching and eliciting questions about these topics.**
- 2. Use worksheets on these trouble-topics that are available in the Mat-010 instructor manual in Center 2 for you to copy, distribute to your students and include in your course in any way you choose.**
- 3. Encourage students to use the MathZone software that comes with the text (see information sheet on MathZone) to practice these trouble-skills.**