

REPORT ON THE MAT-010A FINAL EXAM ITEM ANALYSIS SPRING 2009

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As part of the ongoing assessment of our developmental mathematics courses, an item analysis of the spring 2009 Mat-010A final exam was. Scantrons of 43 students were used to compile the following results.

It was found that 50% or more of the students in Mat-010 got the following skills wrong:

- ◆ Finding the area of a triangle**
- ◆ Using the correct order of operations with decimals**
- ◆ Using the correct order of operations with whole numbers**
- ◆ Simplifying 0 divided by a number**

It was found that 35% or more and fewer than 50% of the students in Mat-010A got the following skills wrong:

- ◆ Finding the cost of a carpet of rectangular shape**
- ◆ Subtracting mixed numbers with different denominators**
- ◆ Dividing decimals**
- ◆ Simplifying a fraction**
- ◆ Solving a whole number word problem using division**
- ◆ Writing a mixed number in decimal form**
- ◆ Adding fractions with different denominators**
- ◆ Solving a multi-step word problem with decimals**
- ◆ Listing the factors of a number**
- ◆ Solving a fractional word problem using division**
- ◆ Adding mixed numbers with different denominators**
- ◆ Ordering decimals**
- ◆ Dividing whole numbers**
- ◆ Writing a word name for a decimal fraction**
- ◆ Multiplying decimals**
- ◆ Multiplying decimals by a power of 10**

It was found that fewer than 20% of the students in Mat-010A got the following skills wrong:

- ◆ **Subtracting whole numbers**
- ◆ **Dividing fractions**
- ◆ **Solving a multi-step word problem with decimals**
- ◆ **Adding decimals**
- ◆ **Place value**
- ◆ **Solving a word problem with decimals using subtraction**
- ◆ **Changing a mixed number to an improper fraction**
- ◆ **Writing a whole number in words**

In order to make use of this information to improve student performance the following steps are recommended:

- 1. Emphasize the skills that students had difficulty with 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 or on the Mathematics Department website, incorporating them into your course in any way you choose.**
- 3. Encourage students to practice these skills when they use any of the technologies available to them with their texts (Aleks or MathZone).**