

REPORT ON THE MAT-010A FINAL EXAM ITEM ANALYSIS Spring 2010

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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 run. Scantrons of 103 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:

- ❖ Using the correct order of operations with whole numbers**
- ❖ Simplifying a fraction**

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

- ❖ Finding the area of a triangle**
- ❖ Writing a mixed number in decimal form**
- ❖ Using the correct order of operations with decimals**
- ❖ Dividing decimals**
- ❖ Multi-step word problems with decimal**
- ❖ Simplify $0/n$**
- ❖ Subtracting mixed numbers with different denominators**
- ❖ Multiplying mixed numbers**
- ❖ Adding mixed numbers with different denominators**
- ❖ Ordering decimals**
- ❖ Finding the cost of a carpet of rectangular shape**

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

- ❖ Estimating a sum**
- ❖ Solving a multi-step word problem with decimals**
- ❖ Finding the missing side of a figure, given the perimeter**
- ❖ Dividing fractions**

- ❖ **Subtracting decimals**
- ❖ **Place value**
- ❖ **Subtracting whole numbers**
- ❖ **Converting a mixed number to an improper fraction**
- ❖ **Adding unaligned decimals**
- ❖ **Solving a word problem with decimals using subtraction**
- ❖ **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 with which students had difficulty by devoting more time teaching and eliciting questions about these topics**
- 2. Use worksheets on these trouble topics that are available in the Mat-010A 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).**