

MATH 2008
Fall 2009
Final Exam Concept Sheet

Use the following list of concepts to help you study; however, you should not assume the list is exhaustive. You should also review the class activities, your notes, your tests, and concept sheets for other tests, etc

Problem solving

Numeration systems—Egyptian, , Roman, and how they compare to the Hindu-Arabic system

Base five numeration system (Alphabetic)

Expanded notation

Place value

Word names for numbers—for example, write the word name for 327.063

Writing numbers in various ways—for example,

- 378 can be represented as 3 hundreds + 7 tens + 8 ones; 378 can also be represented as 2 hundreds + 17 tens + 8 ones
- 0.27 can be represented as 2 tenths + 7 hundredths; 0.27 can also be represented as 27 hundredths
- 10 tenths is equal to 1

Determine which of two numbers is larger; for ex., Which is larger: 0.3 or 0.21? (and be able to justify your answer)

Use base ten blocks to model addition and subtraction with whole numbers and with decimal numbers.

Use alternative algorithms to add, subtract, multiply, and divide

Use an area model to find the product of two numbers

Write word problems for multiplication and division—for example:

- Write a word problem that could be solved using the calculation 4×6 .
- Write a word problem that could be solved using the calculation $20 \div 5$ where 5 is the number of groups or parts (partitive division).
- Write a word problem that could be solved using the calculation $20 \div 5$ where 5 is the number (measurement) of each group (measurement division).

Given a division problem in context, can you interpret the meaning of any remainder?

Operations with fractions—

using pictures or other models to perform calculations

justification of equivalent fractions

Order of operations

Sets

Characteristics of sets of numbers

Using Venn Diagrams to solve problems

Multiples and factors of a number

Prime and composite numbers

Least common multiple and greatest common factor

Divisibility rules