SYLLABUS FOR MATH WORKSHOP
FALL 2019

Instructor: Christopher Rick
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TEXTBOOK: <u>Prealgebra</u>, *OpenStax*

MAJOR GOALS OF THE COURSE:
1. **Prepare students for Math 112 – Contemporary Mathematics next semester**
2. Increase the student's confidence and comfort level in using mathematics.
3. Develop basic math skills used in other courses in math, science, computer information systems, business, economics, and other fields.
4. Develop math skills that help the student function effectively in daily life.
5. Become familiar with standard math vocabulary, approaches, and applications, and strengthen communication skills in math.
6. Expand the student's problem solving and critical thinking skills.

OBJECTIVES - DESIRED STUDENT LEARNING OUTCOMES:
The student will be able to demonstrate each of the following skills in writing on one or more tests without referring to notes, textbook, or other resources:

1. Use Order of Operations Agreement to evaluate numerical expressions involving integers and/or fractions and any combination of addition, subtraction, multiplication, division, whole number exponents, and parentheses.
2. Write the prime factorization of a given natural number greater than 1 and less than 1000.
3. Correctly evaluate expressions involving addition, subtraction, multiplication, and division of pairs of numbers from the following categories, and express the answers in simplest form: a) integers, b) decimal numbers, c) fractions with unlike denominators and mixed numbers (in combination with each other and with whole numbers).
4. Use the symbols $<$, $>$, and $=$ to correctly identify the size relation between pairs of integers, pairs of fractions with unlike denominators, pairs of decimals, and a fraction compared with a decimal.
5. Correctly round a given whole number or decimal number to a given place value.
6. a) Using words, correctly write the name of a given whole number, less than one quadrillion, shown written in standard decimal form.
   b) Using words, correctly write the name of a given positive number, less than one, shown written in standard decimal form.
   c) Correctly write a whole number, less than one quadrillion, in standard decimal form when given its name written in words.
   d) Correctly write a positive number, less than one, in standard decimal form when given its name written in words.
7. a) When given two quantities (measured with either the same or different units), correctly express their relationship using a ratio or rate written in simplest fraction form.
   b) Correctly write a unit rate involving two given quantities.
8. Correctly set up and solve a proportion when given a verbal description of a proportional situation in which one quantity is unknown.

9. Correctly convert a given number from one of the following forms to each of the other two forms: a) percent, b) fraction/mixed number, c) decimal.
10. Find the missing percent, base, or amount when given the other two.
11. Correctly evaluate expressions involving only rational numbers, absolute value symbols, and negative signs.

INTEGRITY:
Each student must show his own work on all assignments and tests. Copying someone else's work, or allowing your work to be copied, is not acceptable. If there is evidence of cheating or inappropriate sharing of information, each student involved will be penalized, in most cases receiving a zero.

HOMEWORK:
Homework exercises are very important because learning is most effective when the student has frequent and repeated practice in applying skills. Each assignment will be due at the beginning of the next class. Assignments should be neat, legible (easy to read), and well organized, with problem numbers clearly labeled, and all work shown.

GRADING:
This is a pass-fail course. Your final grade in the course will be weighted as follows:

Homework	50%
Midterm Exam	25%
Final Exam	25%

PLANNED SCHEDULE:

September 5	Skills Survey
September 12	The Language of Algebra
September 1	The Language of Algebra
September 26	Integers
October 3	Integers
October 10	Fractions
October 17	Fractions
October 24	Midterm Exam
October 31	Decimals
November 7	Decimals
November 14	No Class
November 21	Percents
November 28	No Class
December 5	Percents
December 12	Course Review
December 19	Final Exam