SEP 1995

GRANDE PRAIRIE REGIONAL COLLEGE
ACADEMIC UPGRADING DEPARTMENT
ADULT BASIC EDUCATION

COURSE OUTLINE

Course Name:	Math (MA 0080)
Instructor:	LaVern Stangeland Office: C220 Office Hours: 12:00-1:00 p.m. Monday and Wednesday Telephone: 539-2714 (office) 538-1469 (home)
Dates:	September 1995 to April 1996
Time:	10:00-10:50 a.m. Monday to Friday
Classroom:	B307
Course Description:	This course is an individual program of study aimed at increasing the students ability to read, write, and round decimal numbers, add, subtract, multiply, and divide decimal and fractional numbers, successfully solve problems using the four basic operations of addition, subtraction, multiplication, and division of decimal and fractional numbers, and to utilize the basic concepts of measurement and metric conversion.
Pre-requisites:	Math 0060 or by placement determined by the A.B.E. math placement test.
Course Format:	Students individually work through the self-instruction and exercises in each math module, with help as required from the instructor.
Texts:	Math modules are loaned to students.
Supplies:	Lined paper, pencils, erasers, binder.

Module 2a Objectives:

Upon completion of Module 2a students will:

1. Read decimal numbers correctly with the decimal portion extending from the tenths place to the millionths place.
2. Write decimal numbers correctly with the decimal portion extending from the tenths place to the millionths place.
3. Round decimal numerals correctly to the nearest whole number, tenth, hundredth, thousandth, ten-thousandth, hundred-thousandth, or millionth place.
4. Change decimal numerals to a common fraction or mixed numeral with the denominator written as a power of 10.
5. Add up to five decimal numbers, each of which is five digits in length.
6. Solve problems using addition of decimal numbers.
7. Subtract two decimal numbers of up to six digits in length each.
8. Solve problems using subtraction of decimal numbers.

Module 2b Objectives:

Upon completion of Module 2b students will:

1. Multiply decimal numbers of up to five digits in length by another decimal number of up to five digits in length, properly placing the decimal in the product.
2. Solve problems using multiplication of decimal numbers.
3. Divide decimal numbers of up to six digits in length by whole numbers of decimal numbers of up to four digits in length, properly placing the decimal in the quotient.
4. Solve problems using division of decimal numbers.
5. Arrange three decimal numbers in the correct order from smallest to largest or largest to smallest.

Module 3a Objectives:

Upon completion of Module 3a students will:

1. Define fraction.
2. Identify proper and improper fractions, and mixed numbers.
3. Convert improper fractions to mixed or whole numbers.
4. Convert mixed or whole numbers to improper fractions.
5. Order fractions from smallest to largest, and largest to smallest.
6. Determine whether or not a pair of fractions is equivalent.
7. Determine the lowest common denominator (LCD) of up to six fractional numbers.
8. Reduce fractions to lowest terms.
9. Convert proper or improper fractions to an equivalent fraction with a new denominator.

Module 3b Objectives:

Upon completion of Module 3b students will:

1. Add common fractions or mixed numbers, finding the lowest common denominator, and reducing the answer to lowest terms when necessary.
2. Subtract common fractions or mixed numbers, finding the lowest common denominator, borrowing, and reducing the answer to lowest terms when necessary.

Module 3c Objectives:

Upon completion of Module 3c students will:

1. Multiply common fractions or mixed numbers by whole numbers, common fractions or mixed numbers, converting to improper fractions prior to multiplying, and reducing answer to lowest terms, when necessary.
2. Utilize the cancellation process when multiplying or dividing fractional numbers.
3. Divide common fractions and mixed numbers, converting to improper fractions prior to dividing when necessary, inverting the divisor, utilizing cancellation, and reducing to the lowest terms.
4. Simplify complex fractions using several fraction calculations.

Module 4 Objectives:

Upon completion of Module 4 students will:

1. Define all prefixes used in the metric system (kilo, hecto, deca, deci, centi, milli).
2. Convert between different terms of metric measure, whether the measure is linear, volume or weight.
3. Demonstrate knowledge of the metric conversion chart.
4. Solve problems by adding, subtracting, multiplying, and/or dividing metric units of measure.
5. Demonstrate knowledge of the Celsius thermometer, specifically the freezing point of water, the boiling point of water, room temperature, and body temperature.
6. Add or multiply units of time and convert to the proper number of hours and minutes.

Evaluation:

When each module is completed and the student is ready to challenge a post-test, a quiz is given on the subject matter learned in the module. Upon completion of modules 2a and 2b, there is a quiz on decimals. After completing modules 3a, 3b and 3c there is a quiz on fractions. Students must achieve a passing mark of 70% on each quiz before continuing on to the next module. The average of the eight quizzes is worth 40% of the final grade. The final is worth 60% of the final grade.

Following is a guide to help students through this course.

Quiz	Start Date	Quiz Date	Final Date
2a	_____	_____	
2b	_____	_____	
decimals	_____	_____	
3a	_____	_____	
3b	_____	_____	
3c	_____	_____	
fractions	_____	_____	
measurement	_____	_____	
			_____

NOTE: A student must have a final mark of 70% or better to receive credit in this course.