

Math 0306 Pre-Algebra Course Document

Credit Hours

Three semester hours

Transferability

Not transferable

Prerequisites

None

Course Description

Topics for all formats include basic arithmetical operations on integers and rational numbers, order of operations, introduction to basic geometric concepts, simplification of algebraic expressions and techniques of solving simple linear equations.

This course carries institutional credit but will not transfer and will not be used to meet degree requirements.

Materials

Required Textbook

Learning Outcomes

- Demonstrate basic skills in computations, estimations, applications and order of operations involving whole numbers and decimals.
- Demonstrate basic skills in computations, estimations, applications and order of operations involving fractions.
- Demonstrate basic skills in computations, estimations, applications and order of operations involving rational numbers.
- Perform operations using commutative, associative, distributive and identity properties of multiplication and addition.
- Solve linear equations in one unknown.
- Solve ratio, proportion and percent problems, including applications.
- Recognize simple geometric figures, angle relationships and triangle relationships using their defining properties. Utilize these relationships to answer questions involving angle measurement, similarity and congruency.
- Calculate quantities related to basic geometric figures using both the U.S. and metric systems.

Textbook Sections

Basic College Mathematics An Applied Approach, 8/e
Richard N. Aufmann, Vernon C. Barker, Joanne S. Lockwood
Student Support Edition, ©2009
ISBN-10: 0-547-01674-3

(Treat 1.1 - 1.5 as review)

1.1 - Introduction to Whole Numbers

1.2 - Addition of Whole Numbers

1.3 - Subtraction of Whole Numbers

1.4 - Multiplication of Whole Numbers

1.5 - Division of Whole Numbers

1.6 - Exponential Notation and Order of Operations

1.7 - Prime Numbers and Factoring

2.1 - LCM and GCF

2.2 - Introduction to Fractions

2.3 - Writing Equivalent Fractions

2.4 - Addition of Fractions and Mixed Numbers

2.5 - Subtraction of Fractions and Mixed Numbers

2.6 - Multiplication of Fractions and Mixed Numbers

2.7 - Division of Fractions and Mixed Numbers

2.8 - Order, Exponents and the Order of Operations

3.1 - Introduction to Decimals

3.2 - Addition of Decimals

3.3 - Subtraction of Decimals

3.4 - Multiplication of Decimals

3.5 - Division of Decimals

3.6 - Comparing and Converting Fractions/ Decimals

4.1 - Ratio

4.2 - Rates

4.3 - Proportions

- 5.1 - Introduction to Percents
- 5.2 - Percent Equations, Part I
- 5.3 - Percent Equations, Part II
- 5.4 - Percent Equations, Part III
- 5.5 - Percent Problems: Proportion Method

- 10.1 - Introduction to Integers
- 10.2 - Addition and Subtraction of Integers
- 10.3 - Multiplication and Division of Integers
- 10.4 - Operations with Rational Numbers
- 10.5 - Scientific Notation and Order of Operations

- 11.1 - Variable Expressions
- 11.2 - Introduction to Equations
- 11.3 - General Equations: Part I
- 11.4 - General Equations: Part II
- 11.5 - Translating Verbal Expressions

- 12.1 - Angles, Lines, Geometric Figures
- 12.2 - Plane Geometric Figures
- 12.3 - Area
- 12.4 - Volume
- 12.5 - The Pythagorean Theorem
- 12.6 - Similar and Congruent Triangles