

MATH 1210

INTERMEDIATE ALGEBRA

Course Description:

This course is designed to prepare students to be successful in MATH 1220. Topics include simplifying mathematical expressions, the properties of equality, solving linear equations in one variable, using linear equations to solve problems, fractions, ratios and proportions, graphing and the rectangular coordinate system, relations and functions, systems of linear equations and inequalities in two variables, polynomial expressions and functions, factoring and solving polynomial equations. **Credit earned in MATH 1210 will not count toward degree requirements. 3 credits**

Prerequisites:

ACT Math sub score of 18 or less, Math SAT at least 220 or Math SAT2016 at least 230 within the last 2 years; or Accuplacer score of 1 or 2 within the last 2 years; or MATH 1210 within the last 2 years.

Major Topics:

1) Solving Linear Equations in One Variable

- a. Simplifying Algebraic Expressions
- b. Properties of Equality
- c. Applications of Linear Equations

2) Fractions, Ratios, Proportions, and Percent

- a. Factoring and Simplest Form
- b. Solving Proportions
- c. Applications of Proportions
- d. Applications of Percent
- e. Square Roots and the Pythagorean Theorem

3) Equations and Inequalities in One Variable

- a. Linear Equations and Inequalities
- b. Compound Inequalities and Absolute Value
- c. Formulas and Problem Solving

4) Graphs and Functions

- a. The Rectangular Coordinate System and Graphing
- b. Relations and Functions: Notation and Graphing
- c. Graphing Linear Equations and Inequalities in Two Variables

5) Systems of Linear Equations in Two Variables

- a. Solving Systems of Linear Equations in Two Variables and Three Variables
- b. Applications of Systems of Linear Equations

6) Polynomial Expressions and Functions

- a. Rules of Exponents
- b. Operations on Polynomials and Polynomial Functions

7) Factoring and Solving Polynomial Equations

- a. Greatest Common Factor
- b. Factoring By Grouping
- c. Factoring Trinomials
- d. Special Cases and General Strategy
- e. Zero-Product Property and Solving Polynomial Equations
- f. Applications of Polynomial Equations

Methods:

Class meets once a week for two hours and 15 minutes. In class, the teacher will cover important concepts, work especially difficult problems, and guide students through the work that will be done each week. The teacher will discuss study strategies and help students to avoid common errors. Typically, this class time will be separated into lecture time and time for taking computer assisted quizzes and tests. Students are responsible for 2 flexible hours in the Math Lab per week, with Teaching Assistants, using Math Lab software. All homework, quizzes, tests, and a cumulative final exam will be done on the UNO MyMathLab software.

Student Role:

Students will be expected to attend weekly classes, participate in class, do all homework, quizzes, and tests. Students are responsible each week for 2 flexible hours in the Math Lab working with Teaching Assistants doing homework, quizzes, and tests.

Textbook:

Algebra Class Notes (Packaged with MYMATHLAB Plus Access), Trigstad Packaging

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