

Midwest Region PASS Center

Course Descriptions

ALGEBRA IA

English and Spanish

SCOPE OF COURSE

Algebra I is divided into two parts. Algebra IA and Algebra IB each contain 5 units with 14 lessons in each unit. Units consist of concepts and strategies in mathematical standards with an emphasis upon standards from states sending migrant students to sites throughout the country.

SEQUENCE OF SKILLS

Unit 1 - Foundations

1. Real Numbers
2. Sets
3. Variables and Axioms
4. Real Number Properties, Commutative, Associative, and Distributive
5. Properties of Real Numbers
6. Density Property of Real Numbers
7. Addition of Signed (+/-) Numbers (Integers)
8. Subtraction of Signed (+/-) Numbers (Integers)
9. Multiplication and Division of Signed Numbers
10. Fractions and Number Sense
11. Operations With Fractions
12. Decimals
13. Scientific Notation and Percent
14. Properties of Real Numbers, Order, and the Number Line

Unit 2 – Measurement and Mathematic Reasoning

1. Exponents
2. Operations With Exponents
3. Radicals
4. Like Radicals
5. Absolute Value
6. Order of Operations
7. Measurement – Conversions
8. Nonstandard Measurement and Measurement as Problem Solving
9. Measurement – Estimation and Accuracy
10. Mathematical Reasoning
11. Mathematical Reasoning – “And” and “Or”
12. Mathematical Reasoning – Conditional and Biconditional Statements
13. Mathematical Reasoning – Deduction
14. Mathematical Reasoning – Induction

Unit 3 – Algebraic Expressions

1. Writing Algebraic Expressions
2. Evaluating Algebraic Expressions with One Variable
3. Evaluating Algebraic Expressions with More than One Variable
4. Polynomials
5. Combining Like Terms

Midwest Region PASS Center

Course Descriptions

6. Adding and Subtracting Polynomials
7. Simplifying Algebraic Expressions with Exponents
8. More on Algebraic Expressions with Exponents
9. Multiplying Polynomials
10. Multiplying a Binomial Times a Binomial
11. Special Binomial Products
12. Multiplication with Polynomials
13. Dividing a Polynomial by a Monomial
14. Dividing a Polynomial by a Binomial

Unit 4 - Factoring

1. Factoring – Common Factors
2. The Difference of Two Squares
3. Factoring Trinomials
4. Factoring Trinomials – Advanced
5. Factoring Trinomials – More Advanced
6. Factoring by Grouping
7. Factoring the Sum and Difference of Two Cubes
8. Factoring Completely
9. Reducing Algebraic Fractions – Using Factoring
10. Addition and Subtraction of Algebraic Fractions with Common Denominators
11. Addition and Subtraction of Algebraic Fractions without Common Denominators
12. Multiplying and Dividing Algebraic Fractions
13. Complex Algebraic Fractions
14. More on Complex Algebraic Fractions

Unit 5 – Equations

1. Equations
2. One Step Equations – Addition and Subtraction
3. One Step Equations – Multiplication and Division
4. Two Step Equations
5. Multiple-Step Equations
6. Writing Equations
7. Word Problems with One Variable (Number Relations, Consecutive Integer, and Average Problems)
8. Word Problems with One Variable (Coin Problems and Interest Problems)
9. Word Problems with One Variable (Perimeter and Area)
10. Rational Algebraic Expressions
11. Distance – Rate – Time Problems
12. Work Problems and Percent Problems
13. Mixture Problems
14. Literal Equations