

Math7 –Algebra-1-A Class

Xilin Northwest Chinese School

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Algebra1 – 7th Grade

About This Class

The course will cover basic algebra concepts which are including Operations with Real Numbers , Solving Equations , Inequalities , Powers and Polynomials , Factoring Polynomials and Rational Expressions. The course will push students to their highest ability and encourage their problem solving skills. Upon completion, students will have a deep understanding of basic mathematical principles and be ready to tackle their high school mathematics courses with confidence.

***Textbook:**

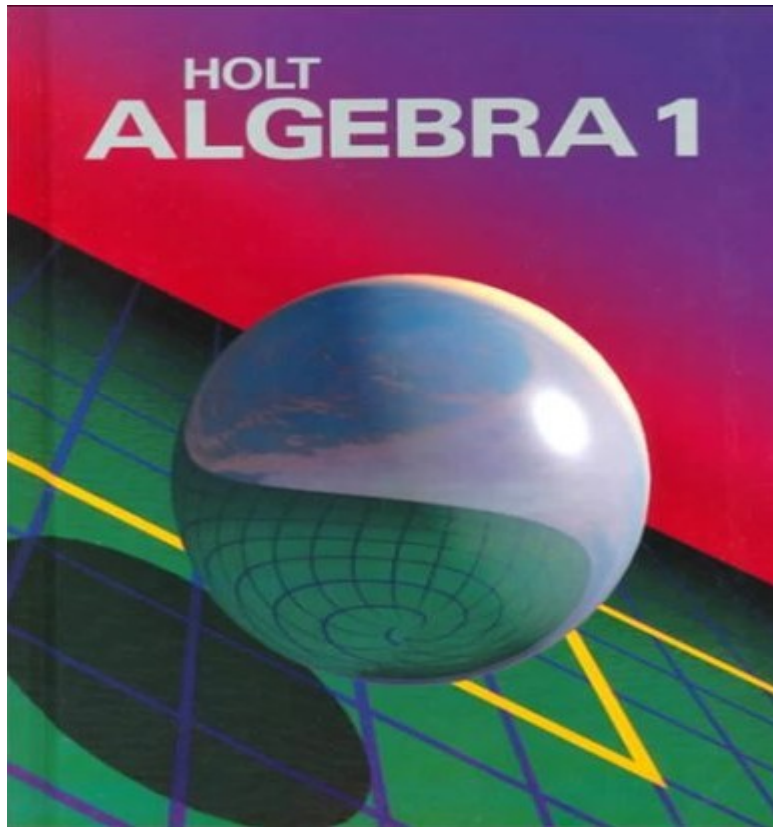
ALGEBRA 1, Publisher: Holt, Rinehart and Winston, Inc., 1992

Authors:

Eugene D. Nichols, Mervine L. Edwards, etc.

The link to amazon.com to buy this book:

http://www.amazon.com/gp/product/offer-listing/0030054192/qid=1124650011/ref=sr_pb_a//102-3803792-6292912?condition=all



Syllabus (from Chapter1 to Chapter8)

First semester (Sept,09 – Dec,09)– Chapter1-4 2 or 3 sections each week

***Introduction to Algebra**

1. Algebraic Expressions.
2. Grouping Symbols.
3. Exponents
4. Formulas from Geometry
5. The commutative and Associative Properties.
6. The distributive Property.
7. Combining Like Terms.

***Operations with Real Numbers**

1. The Set of Real Numbers.
2. Opposites and Absolute Value.
3. Addition on a Number Line.
4. Adding Real Numbers.
5. Subtraction of Real Numbers.
6. Multiplication of Real Numbers.
7. Division of Real Numbers.
8. Mixed Operations.
9. Like Terms.
10. Removing Parentheses.

***Solving Equations**

1. Solving Equations by Adding or Subtracting or by Multiplying Or Dividing.
2. Using two properties of Equality.
3. Equations with variable on both sides.
4. Equation with Parentheses.
5. Problem Solving.

***Applying Equations**

1. Translating English to Algebra.
2. Problem solving: Two or more Numbers, Consecutive Integer Problems, Perimeter and Angle Measure.
3. Equations with Fractions, with Decimals.
4. Percent Problems.

Second semester (Jan,10 – May,10)– Chapter5-8 2 or 3 sections each week

***Inequalities and Absolute Value (Jan 10, Jan 17, Jan 24)**

1. The Addition, Subtraction, Multiplication and Division Properties of Inequalities.
2. Conjunction and Disjunction.
3. Combining Inequalities.
4. Problem Solving.
5. Equations and Inequalities with Absolute Value.

***Powers and Polynomials (Jan 31, Feb 07, Feb 21)**

1. Multiplying Monomials.
2. Powers of Monomials.

3. Dividing Monomials.
4. Negative Exponents.
5. Scientific Notation.
6. Simplifying Polynomials.
7. Addition, subtraction and Multiplication of Polynomials.

*Factoring Polynomials (Feb28, March7, March14, March21, March28)

1. Introduction of Factoring.
2. Greatest Common Monomial Factor.
3. Factoring Trinomials.
4. Combined Types of Factoring.
5. Solving Quadratic Equations by Factoring.
6. Problem solving.

*Rational Expressions (Apri & May)

1. Simplifying Rational Expressions.
2. Multiplying and Dividing Rational Expressions.
3. Adding and Subtracting Rational Expressions.
4. Dividing Polynomials.
5. Complex Rational Expressions.