

Sequential Algebra 1
West Aurora School District
State Goal 6 – Number Sense

STATE GOAL 6 – Demonstrate and apply a knowledge and sense of numbers, including numeration and operations (addition, subtraction, multiplication, division), patterns, ratios, and proportions.

Concepts: Need to Know About Number Sense

- Order of Operations
- Number Sentences and Word Problems
 - Rational Numbers
 - Single and Multi-Step
 - Ratios and Proportions
 - Four Basic Operations
- Percent
- Reasonableness of Solutions

Skills: Be Able to Do

- **Apply** (Knowledge and Rules of Order of Operations)
- **Set-up** (Single and Multi-Step Number Sentences and Word Problems Involving Ratios, Proportions, Percents, etc with Rational Numbers)
- **Evaluate** (Single and Multi-Step Number Sentences and Word Problems Involving Ratios, Proportions, Percents, etc with Rational Numbers)
- **Solve** (Single and Multi-Step Number Sentences and Word Problems Involving Ratios, Proportions, Percents, etc with Rational Numbers)
- **Use** (Four Basic Operations)
- **Judge** (Reasonableness of Solutions)

Topics or Contexts: Problems involving ratios and proportions may include the following: quantity comparisons, rate of change, and unit rate.

Percent problems would be dealing with: sales tax, tips, interest, discount, markup, quantity comparisons, commission, and compound interest.

Various lessons in textbook

Problem solving activities involving real-life situations

Big Ideas

Essential Questions

Sequential Algebra 1
West Aurora School District
State Goal 7 – Measurement

STATE GOAL 7 – Estimate, make and use measurement of objects, quantities and relationships and determine acceptable levels of accuracy.

Concepts: Need to Know About Measurement

- Unit Conversions
 - Same System

Skills: Be Able to Do

- **Change** (Unit Conversions Including Calculations with Mixed Units)

Topics or Contexts: Various lessons in textbook

Problem solving activities involving real-life situations

Big Ideas

Essential Questions

Sequential Algebra 1
West Aurora School District
State Goal 8 – Algebra

STATE GOAL 8 – Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.

Concepts: Need to Know About Algebra

- Equivalent Algebraic Expressions
- Variable Expressions and Functions
- Slope
 - Equation
 - Table of Values
 - Graph
- Graphs
 - Quantitative Relationships
 - Situational Relationships
- Linear Equations and Inequalities
 - Formulas
- Functions
 - Domain
 - Range
 - Rates of Change

Skills: Be Able to Do

- **Simplify** (Equivalent Algebraic Expressions)
- **Identify** (Equivalent Algebraic Expressions and Slope from Table of Values, Graphs, and Equations)
- **Represent** (Quantitative Relationships Algebraically and Graphically)
- **Interpret** (Meaning, or the Situation Represented by the Graph)
- **Solve** (Linear Equations and Inequalities)
- **Select** (Appropriate Formula/Method)
- **Evaluate** (Variable Expressions, Functions, and Formulas)
- **Analyze** (Functions)
- **Investigate** (Domain, Range, and Rates of Change)

Topics or Contexts: Equivalent algebraic expressions would be in the form: exponential, rational, factored, polynomial.

Review plotting and identifying points on a coordinate plane.

Various lessons in textbook

Problem solving activities involving real-life situations

Big Ideas

Essential Questions

Sequential Algebra 1
West Aurora School District 129
State Goal 10 – Data Analysis, Statistics, and Probability

STATE GOAL 10 – Collect, organize, and analyze data using statistical methods; predict results; and interpret uncertainty using concepts of probability.

Concepts: Need to Know About Data Analysis

- Graphs, Charts, and Tables
- Probabilities
- Statistics

Skills: Be Able to Do

- **Read** (Graphs, Charts, and Tables)
- **Interpret** (Graphs, Charts, and Tables)
- **Predict** (Statistical Results)
- **Interpolate** (Data/Information)
- **Extrapolate** (Data/Information)
- **Compute** (Probabilities and Central Tendencies)

Topics or Contexts: Probability of single or repeated trials with or without replacement.

Various lessons in textbook

Problem solving activities involving real-life situations

Big Ideas

Essential Questions