

Wallenpaupack Area School District

COURSE: Pre-Algebra

GRADE LEVEL: Ninth Grade

LENGTH OF COURSE: 90 days/semester (Block Schedule)

TEXT: CORD BRIDGES to Algebra and Geometry

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COURSE DESCRIPTION:

Pre-Algebra Math is designed to orient the student toward application and practice of mathematics concepts and skills. It includes basic topics from arithmetic, geometry, and algebra. It prepares the student for Applied Algebra.

CURRICULUM WRITING TEAM:

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DATE OF REVISION:

2006

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Decimals and Problem Solving

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.B
2.2.11.E
2.4.11.E
2.5.11.A
2.5.11.B
2.5.11.C
2.5.11.D
2.5.11.E

Topics:	Skills:
The decimal system Rounding decimals Variables and expressions Properties of addition Estimating sums and differences Properties of multiplication Estimating products and quotients A problem solving strategy	Compare, add, subtract, multiply, divide, and round decimals Understand variables and expressions Identify and apply properties of addition and multiplication Estimate sums, differences, products and quotients Apply problem solving strategies to solve real-life problems
Activities:	Performance Assessments:
Textbook problem solving Worksheets Partner work Board work	Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Rational Numbers

PA Standards: 2.1.11.A
2.2.11.A
2.4.11.E

Topics:	Skills:
Equivalent fractions Fractions and decimals Rational numbers and inequalities Adding, subtracting, multiplying and dividing rational numbers Graphing inequalities	Identify equivalent fractions Reduce fractions Converting improper fractions to mixed numbers and decimals Converting mixed numbers to improper fractions and decimals Compare fractions Graph inequalities on a number line Add, subtract, multiply and divide rational numbers
Activities:	Performance Assessments:
Textbook problem solving Worksheets Partner work Board work	Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Measurement

PA Standards: 2.1.11.A
2.2.11.A
2.3.11.A
2.3.11.C

Topics:	Skills:
Measuring length in English and Metric measures Converting between English and Metric measures Converting rates	Measuring using inches, feet, miles, mm, cm, m, and km Convert between Metric and English measures of unit Convert rate units
Activities:	Performance Assessments:
Textbook problem solving Worksheets Partner work Board work	Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Integers

PA Standards: 2.1.11.A
2.2.11.A

Topics:	Skills:
Graphing integers Absolute value Integers and inequalities Adding, subtracting, multiplying and dividing integers	Graph integers on a number line Compare integers Compute absolute values Add, subtract, multiply and divide integers
Activities:	Performance Assessments:
Textbook problem solving Worksheets Partner work Board work	Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Solving Equations

PA Standards:

Topics: Addition, subtracting, multiplication and division equations Two-step equations Adding and subtracting expressions Equations with variable on both sides Formulas	Skills: Solve one step equations Solve multi-step equations Combine like terms Solve equations with more than one variable Solve formulas involving variables
Activities: Textbook problem solving Worksheets Partner work Board work	Performance Assessments: Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Ration, Proportion and Probability

PA Standards: 2.1.11.A
2.2.11.A
2.8.11.D

Topics:	Skills:
<ul style="list-style-type: none"> Ratio and proportion Dimensional analysis Using proportions Probability Sample space Independent and dependent events Experimental probability and simulation Theoretical probability Sampling 	<ul style="list-style-type: none"> Write ratios Solve problems Convent between units Calculate unit rate Solve problems using proportions Find probabilities of events Find simple spaces Deciding independent vs. dependent events Finding experimental probability using simulations Understand theoretical vs. experimental probabilities
Activities:	Performance Assessments:
<ul style="list-style-type: none"> Textbook problem solving Worksheets Partner work Board work 	<ul style="list-style-type: none"> Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Percents

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.F
2.4.11.E
2.6.11.A
2.6.11.E
2.6.11.G
2.6.11.H
2.7.11.A
2.7.11.B
2.7.11.D
2.7.11.E

Topics: Fractions, decimals and percents Finding a percent of number Estimating percents Solving percent equations Percent change	Skills: Convert between fractions, decimals and percents Calculate the percent of a number Estimate percents Solve equations involving percents Calculate percents change
Activities: Textbook problem solving Worksheets Partner work Board work	Performance Assessments: Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work

Wallenpaupack Area School District

Course: Pre-Algebra

Grade Level: Grade 9

Unit: Working with Data

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.F
2.3.11.E
2.5.11.A
2.8.11.D

Topics: Measures of central tendency Frequency tables Stem-and-leaf plots Bar graphs and histograms Line graphs Box and whisker graphs Circle graph	Skills: Calculate mean, median, mode and range Construct and understand frequency tables Construct and understand stem and leaf plots Construct and understand bar graphs and histograms Construct and understand line graphs Construct and understand circle graphs
Activities: Textbook problem solving Worksheets Partner work Board work	Performance Assessments: Teacher produced tests and quizzes Class assignments Class participation Homework Board work Teacher observation Lab work