

Wallenpaupack Area School District

COURSE: SAT Prep Mathematics

GRADE LEVEL: Tenth and Eleventh Grade

LENGTH OF COURSE: 22 or 23 days / quarter (Block Schedule)

TEXT: 1. Barron's Math Workbook for the SAT 1
2. The Official SAT Study Guide: For the New SAT

PUBLISHER: 1. Baron's Educational Series, Inc.
2. College Entrance Examination Board and Educational Testing Service

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2. 2005

COURSE DESCRIPTION:

SAT Prep is designed for the college-bound student who wants to enhance his or her score on the Scholastic Achievement Test. This class will increase the familiarity with specific directions and question formats of the SAT test. Specific question types and problem-solving strategies will be incorporated to enhance student achievement.

CURRICULUM WRITING TEAM:

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DATE OF REVISION:

2006

Wallenpaupack Area School District

Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Arithmetic Skills and Concepts

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.B
2.2.11.D
2.2.11.F
2.5.11.A
2.5.11.B
2.5.11.C
2.5.11.D

Topics:	Skills:
Order of Operations Estimation Divisibility Integers Sets, Unions and Intersections	Use the order of operations to solve problems Estimate answers Solve problems using integers Determine unions and intersections of sets
Activities:	Performance Assessments:
Questions of the Day Textbook problem solving Worksheets Partner work/ Cooperative learning Board work Utilization of the scientific calculator Student mini-lesson	Teacher produced tests and quizzes Class assignments Class participation Homework Student mini-lesson

Wallenpaupack Area School District

Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Operations with Fractions

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.B
2.2.11.D
2.2.11.F
2.5.11.A
2.5.11.B
2.5.11.C
2.5.11.D

Topics:	Skills:
Addition of Fractions Subtraction of Fractions Multiplication of Fractions Division of Fractions Reciprocals Comparison of Fractions Operations with Mixed Numbers Simplification of Complex Fractions	Add, subtract, multiply and divide fractions Find the reciprocal Compare fractions Add, subtract, multiply and divide mixed numbers Find the least common denominator to simplify complex fractions
Activities:	Performance Assessments:
Questions of the Day Textbook problem solving Worksheets Partner work/ Cooperative learning Board work Utilization of the scientific calculator Student mini-lesson	Teacher produced tests and quizzes Class assignments Class participation Homework Student mini-lesson

Wallenpaupack Area School District

Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Fraction Word Problems

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.B
2.2.11.D
2.2.11.F
2.5.11.A
2.5.11.B
2.5.11.C
2.5.11.D

Topics: Fractional Parts	Skills: Form a fraction in which the number in the numerator is being compared with the number in the denominator Find a fractional part of a fractional part Find the whole when a fractional part is given
Activities: Questions of the Day Textbook problem solving Worksheets Partner work/ Cooperative learning Board work Utilization of the scientific calculator Student mini-lesson	Performance Assessments: Teacher produced tests and quizzes Class assignments Class participation Homework Student mini-lesson

Wallenpaupack Area School District

Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Percents

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.B
2.2.11.D
2.2.11.F
2.5.11.A
2.5.11.B
2.5.11.C
2.5.11.D

Topics:	Skills:
Fractions, Decimal and Percent Equivalents Percent of a Number Percent of Change	Rewrite fractions and decimals as percents Rewrite percents as decimals and fractions Find the percent of a number Find the original amount after a percent change
Activities:	Performance Assessments:
Questions of the Day Textbook problem solving Worksheets Partner work/ Cooperative learning Board work Utilization of the scientific calculator Student mini-lesson	Teacher produced tests and quizzes Class assignments Class participation Homework Student mini-lesson

Wallenpaupack Area School District

Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Algebraic Methods

PA Standards: 2.1.11.A
 2.2.11.A
 2.2.11.F
 2.5.11.A
 2.5.11.B
 2.5.11.C
 2.5.11.D
 2.8.11.D
 2.8.11.E
 2.8.11.F
 2.8.11.G
 2.8.11.H
 2.8.11.J
 2.8.11.K
 2.8.11.L
 2.8.11.N
 2.8.11.S

Topics:	Skills:
Solutions of Equations Equations With More Than One Variable Polynomials and Algebraic Fractions Factorization of Polynomials Quadratic Equations Systems of Equations Radicals	Solve linear equations using inverse operations Solve linear equations using two operations Solve linear equations using the distributive law Solve equations containing fractions Solve equations using the cross-product property Use a root of an equation to answer a question Solve equations containing radicals Factor equations utilizing algebraic concepts
Activities:	Performance Assessments:
Questions of the Day Textbook problem solving Worksheets Partner work/ Cooperative learning Board work Utilization of the scientific calculator Student mini-lesson	Teacher produced tests and quizzes Class assignments Class participation Homework Student mini-lesson

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Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Geometry Concepts and Reasoning

PA Standards: 2.1.11.A
 2.2.11.A
 2.2.11.B
 2.2.11.D
 2.2.11.F
 2.5.11.A
 2.5.11.B
 2.5.11.C
 2.5.11.D
 2.7.11.A
 2.9.11.A
 2.9.11.B
 2.9.11.C
 2.9.11.D
 2.9.11.E
 2.9.11.F
 2.9.11.G
 2.9.11.I
 2.9.11.J
 2.10.11.B

Topics:	Skills:
Angle Relationships Special Triangles Triangle Inequality Relationships Polygons and Parallelograms Perimeter, Area, and Volume Circles Coordinate Geometry	Understand basic postulates of geometry Identify angle types Find the measures of angles Determine measurements of angles formed by parallel lines Use properties of 45-45-90 triangles to solve the lengths of sides of a right triangle Use properties of 30-60-90 triangles to solve the lengths of sides of a right triangle Use Pythagorean Theorem to solve the sides of a right triangle Use the trigonometric ratios to solve sides and angles of a right angle Use the triangle inequality theorem to determine if a triangle exists Define and classify special types of quadrilaterals Apply relationships among sides and angles of parallelograms Calculate the area of various geometric figures Calculate the circumference, arc length and arc measure of a circle

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	Skills: (continued) Calculate the perimeter of various geometric figures Calculate the volume of various geometric figures Calculate the area of a shaded geometric region Recognize properties of chords, secants and tangents Calculate the distance, midpoint and slope between two points
Activities: Questions of the Day Textbook problem solving Worksheets Partner work/ Cooperative learning Board work Utilization of the scientific calculator Student mini-lesson	Performance Assessments: Teacher produced tests and quizzes Class assignments Class participation Homework Student mini-lesson

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Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Advanced Algebraic Concepts,
Graphing, Probability

PA Standards: 2.1.11.A
2.2.11.A
2.2.11.B
2.2.11.C
2.2.11.D
2.2.11.F
2.4.11.E
2.5.11.A
2.5.11.B
2.5.11.C
2.5.11.D
2.7.11.A
2.8.11.A
2.8.11.B
2.8.11.C
2.8.11.D
2.8.11.H
2.8.11.O
2.8.11.P
2.8.11.Q
2.11.11.C

Topics:	Skills:
Arithmetic Sequences Geometric Sequences Exponential Growth and Decay (optional) Exponents Functions Function Notation (optional) Probability Graphs and Tables	Calculate the nth term and sum of an arithmetic sequence Calculate the nth term and sum of a geometric sequence Calculate exponential growth and decay problems (optional) Use properties of exponents to evaluate and simplify exponential expressions and equations Identify domain and range of a function Evaluate a function Perform operations with functions (optional) Calculate the probability of specific events Solve word problems involving graphs and tables

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Activities:	Performance Assessments:
Questions of the Day Textbook problem solving Worksheets Partner work/ Cooperative learning Board work Utilization of the scientific calculator Student mini-lesson	Teacher produced tests and quizzes Class assignments Class participation Homework Student mini-lesson

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Course: SAT Prep Mathematics

Grade Level: Grade 10 and 11

Unit: Student Mini-Lessons

PA Standards: 2.1.11.A
 2.2.11.A
 2.2.11.F
 2.5.11.A
 2.5.11.B
 2.5.11.C
 2.5.11.D
 2.7.11.A
 2.8.11.D
 2.8.11.G
 2.8.11.H
 2.8.11.K
 2.8.11.L
 2.8.11.P
 2.9.11.I

Topics:	Skills:
Direct and Indirect Variation Probability Averages Graphs of Equations Absolute Value Slope Inequalities Similar Figures Percent Increase and Decrease	Determine if two quantities are directly or indirectly related Calculate the probability of an event occurring or not occurring Calculate the average of a set of data or work backwards when given the average Graph equations with horizontal and/or vertical shifts Solve equations containing absolute value Calculate slope from equations, two points and the coordinate plane Determine the solutions of an inequality Apply properties of similar figures to solve problems Find the percent of increase and decrease
Activities:	Performance Assessments:
Student mini-lesson	Student mini-lesson