

New Paltz Central School District

Mathematics
Pre-Math A

TIME *	CONTENT	SKILLS	ASSESSMENTS
2-3 Weeks	<p><u>UNIT 1: Signed Numbers/Integers</u></p> <ul style="list-style-type: none"> • Application of signed numbers • Comparing/ordering • Exponents on integers (powers of negative numbers) 	<ul style="list-style-type: none"> • Add using a number line • Add using manipulatives • Subtract by changing to an addition problem • Multiply • Divide 	<ul style="list-style-type: none"> • Tests • Quizzes
2 Weeks	<p><u>UNIT 2: Order of Operations and Evaluating Algebraic Expressions</u></p> <ul style="list-style-type: none"> • Simplifying using the order of operations • Evaluating algebraic expressions 	<ul style="list-style-type: none"> • Simplify fractions • Evaluate algebraic expressions 	<ul style="list-style-type: none"> • Tests • Quizzes
2 Weeks	<p><u>UNIT 3: Fractions</u></p> <ul style="list-style-type: none"> • Comparing fractions • Adding, subtracting, multiplying, and dividing fractions • Applications of fractions 	<ul style="list-style-type: none"> • Compare fractions • Add, subtract, multiply, and divide fractions 	<ul style="list-style-type: none"> • Tests • Quizzes • Fraction Project
2-3 Weeks	<p><u>UNIT 4: Algebraic Expressions/ Introduction to Polynomials</u></p> <ul style="list-style-type: none"> • Adding and subtracting (combining like terms) • Applications – perimeter, area, etc. 	<ul style="list-style-type: none"> • Multiply using exponents • Multiply using the distributive property • Divide 	<ul style="list-style-type: none"> • Tests • Quizzes
2-3 Weeks	<p><u>UNIT 5: Math Properties</u></p> <ul style="list-style-type: none"> • Commutative property • Associative property • Additive identity • Additive inverse • Multiplicative identity • Multiplicative property of 0 		<ul style="list-style-type: none"> • Tests • Quizzes

**Pre Math A was designed to be flexible in meeting the needs of the particular students enrolled in any given year. The amount of time allotted for each unit may vary.*

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<p>8-12 Weeks</p>	<p><u>UNIT 6: Solving and Checking First Degree Equations and Inequalities</u></p> <ul style="list-style-type: none"> • Checking whether a number is a solution to a given equation • Solving one-step equations (using opposite operations) • Solving two-step equations (using opposite operations) • Equations involving combining like terms • Equations with variables on both sides • All of the above types of equations involving negative coefficients • Checking a solution in an equation to verify the accuracy of the solution • Finding solutions to inequalities by checking given solutions 	<ul style="list-style-type: none"> • Solve one- and two-step equations using opposite operations 	<ul style="list-style-type: none"> • Tests • Quizzes • Mid-term Examination
<p>3-4 Weeks</p>	<p><u>UNIT 7: Ratio, Proportion, Percents, and Similar Triangles</u></p> <ul style="list-style-type: none"> • Ways to represent ratios, e.g., 5:8, 5 to 8, 5/8, etc. • Simplifying ratios • Determining whether or not ratios are equivalent • Solving proportions • Using proportions in problem solving • Percents <ul style="list-style-type: none"> ○ Definition of percent ○ Converting between percents, fractions, and decimals ○ Using percents in word problems – using proportions • Similar triangles and similar figures <ul style="list-style-type: none"> ○ Solving for missing sides of similar figures – using proportions ○ Shadow problems and indirect measurement 	<ul style="list-style-type: none"> • Use proportions to solve problems • Convert between percents, fractions, and decimals • Solve for missing sides of similar figures using proportions 	<ul style="list-style-type: none"> • Tests • Quizzes

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2 Weeks	<p><u>UNIT 8: The Pythagorean Theorem</u></p> <ul style="list-style-type: none"> • Right triangles • Squares and rectangles 	<ul style="list-style-type: none"> • Given both legs, solve for the hypotenuse • Given one leg and the hypotenuse, solve for the other leg • Find the length of the diagonal given side length(s) • Find the length of a side given the length of the diagonal of a square • Find the length of a side of a rectangle given the lengths of the diagonal and the other side 	<ul style="list-style-type: none"> • Tests • Quizzes
5 Weeks	<p><u>UNIT 9: Geometry (Integrated with Algebra)</u></p> <ul style="list-style-type: none"> • Types of angles • Complimentary and supplementary angles • Linear pairs • Vertical angles • Triangles (sum of the angles in a triangle is 180°) • Classification of triangles • Isosceles triangles • Exterior angles of a triangle • Parallel lines cut by a transversal 		<ul style="list-style-type: none"> • Tests • Quizzes

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TIME	CONTENT	SKILLS	ASSESSMENTS
<p>3 Weeks</p>	<p><u>UNIT 10: Algebraic Expressions and Verbal Expressions</u></p> <ul style="list-style-type: none"> • Translating verbal expressions into algebraic expressions • Identifying and using addition phrases – e.g., increased by, more than, sum, etc. <ul style="list-style-type: none"> ○ Identifying and using subtraction phrases – e.g., decreased by, less than, difference, etc. ○ Identifying and using multiplication phrases – e.g., product, times, half of, etc. ○ Identifying and using division phrases – e.g., quotient, half of, etc. • Defining a variable/writing “let statements” • Translating verbal equations into algebraic equations 	<ul style="list-style-type: none"> • Translate verbal expressions into algebraic expressions 	<ul style="list-style-type: none"> • Tests • Quizzes

<p>2-3 Weeks</p>	<p><u>UNIT 11: Area and Perimeter</u></p> <ul style="list-style-type: none"> • Applications of area and perimeter • Area of polygons <ul style="list-style-type: none"> ○ Area involving sides whose lengths are represented by monomials/polynomials • Perimeter of polygons 	<ul style="list-style-type: none"> • Use formulas to find areas of squares, rectangles, parallelograms, triangles, and trapezoids • Use addition to find perimeter • Use multiplication/distributive property to find perimeter of figures with repeated side lengths – e.g., square, rectangles, parallelograms, equilateral triangles 	<ul style="list-style-type: none"> • Tests • Quizzes
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2 Weeks	<u>UNIT 12: Coordinate Geometry</u> <ul style="list-style-type: none">• Plotting points• Labeling axes and quadrants• Graphing lines – using a table only		<ul style="list-style-type: none">• Quizzes• Tests