New Paltz Central School District

Mathematics
Math A – Semester 1

TIME	CONTENT	SKILLS	VOCABULARY
September (2 weeks)	**UNIT 1: Number Theory and Properties** • Number sets • Order of operations • Math properties • Problem solving • Binary operations • (Text – Chapters 1, 2, and 3)	• Identify rational vs. irrational numbers. • Evaluate numerical operations using order of operations. • Identify and apply math properties. • Problem solving strategies. (work backwards, find a pattern, draw diagram/chart/table, trial and check)	identity inverse closure commutative associative distributive additive inverse/identity multiplicative inverse/identity rational irrational radical
September – October (3 weeks)	**UNIT 2: Algebraic Expressions and Formulas** • Evaluate algebraic expressions and formulas. • Translate verbal expressions/sentences into mathematical expressions. • Area, perimeter, and volume formulas. • Solve literal equations. (Text – Chapter 4)	• Using exponents • Order of operations • Solving multiple step linear equations • Converting basic English phrases to mathematical operations.	perimeter area volume literal equation simplify coefficient

New Paltz Central School District

Mathematics
Math A – Semester 1

TIME	CONTENT	SKILLS	VOCABULARY
October (3 weeks)	**UNIT 3: Operations With Polynomials** • Exponent laws. • Distributive property (double distribute) • Combining like terms	• Working with fractions (common denominators) • Applying exponent laws • Operations with polynomials	monomial binomial trinomial polynomial like terms common denominators undefined fractions simplify

November – December (4-5 weeks)	**UNIT 4: Solving Algebraic Equations and Word Problems**
	• Translating verbal expressions/sentences into mathematical expressions/equations
	• Solving fractional equations
	   ○ Cross multiplication
	• Variables on both sides
	• Solving linear equations with integral, decimal, fractional coefficients
	• Solving and graphing inequalities (on a number line)
	• Solving word problems
	   ○ Motion problems, coin problems, age problems
		• Combine like terms
		• Apply properties
		• Apply problem solving strategies
		• Reading for critical information
		• Writing 'let' statements (defining the variables)
			inverse operation
			rate

New Paltz Central School District

Mathematics
Math A – Semester 1

TIME	CONTENT	SKILLS	VOCABULARY
December – January (3 weeks)	**<u>UNIT 5: Radicals</u>** • Rational and irrational numbers • Simplifying radicals • Operations with radicals (addition, subtraction, multiplication, division.)	• Produce perfect square factors for numbers and monomials. • Factors	like radicals exact value approximation rational irrational