New Paltz Central School District

Mathematics
Math A – Semester 3

TIME	CONTENT	SKILLS	VOCABULARY
September (3 weeks)	**UNIT 11: Coordinate Geometry** • Radicals • Write linear equations • Coordinate area and perimeter • Graphing linear equations • Coordinate area – inscribed polygons • Informal coordinate proofs	• Distance midpoint/slope formulas • Area formulas • Triangle properties • Quadrilateral properties	midpoint bisect median parallel altitude perpendicular
September - October (3 weeks)	**UNITS 12: Quadratic Equations** • Solving graphically • Solving algebraically • Real world applications	• Factoring • Setting up a table of values • Calculating axis of symmetry • Using the graphing utility (window/left bound, right bound)	axis of symmetry turning point vertex (maximum/minimum) parabola

October (3 weeks)	**UNIT 13: Systems of Equations**
	• Types of systems
	   o Linear linear
	   o Quadratic linear
	   o Circles quadratic and circle linear
	• Modeling real world systems
		• Solving systems algebraically (elimination and substitution
		• Solving systems graphically
		• Slope-intercept method
		• Solution sets
			solution set
			point of intersection

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TIME	CONTENT	SKILLS	VOCABULARY
November (2 weeks)	**UNIT 14: Locus** • Non-technical introduction (real-world problems) • Review coordinate geometry • Review graphing quadratic equations • Simple and compound locus problems • Area, circumference of a circle	• 5 basic locus theorems • Writing equations of lines • Lines parallel and perpendicular to the axis • Equations of circles • Reading for critical information • Using a compass and straight edge	locus bisector fixed distance equidistant perpendicular (bisector)
November (1 week)	**UNIT 15: Constructions** • Angles o Bisectors o Perpendicular • Segments o Midpoint o Median o Bisect • Parallel lines	• Applying the basic constructions • Using a compass and straight edge	midpoint median altitude bisect parallel

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November-December (3 weeks)	**UNIT 16: Uncertainty** • Single event with emphasis on and and or probabilities • Compound events with and without replacement • Permutations • Combinations • Set theory • Counting principle	• Basic probability • Sample space (tree diagram) • Identifying and reasoning the appropriate method of solution	ordered null set factorial not ordered subset outcome set impossibility complement tally certainty mutually exclusive frequency table union independent event experimental intersection theoretical
December – January (2 weeks)	**UNIT 17: Statistics** • Measures of central tendency • Varied applications • Graphical representations • Analysis	• Mean, median, mode • Histogram • Box plot • Stem and leaf plots • Circle graph • Scatter plot • Quartile • Percentile	mean median mode range tally ascending order descending order frequency

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January (1 week)	**UNIT 18: Logic**
	• Statements
	     o Inverse
	     o Converse
	     o Contrapositive
	• Conditional statements
	     o Converse
	     o Contrapositive
	• Logical equivalence
		• Applied problems using the properties of polygons	inverse
			 converse
			 contrapositive
			 equivalent