

Scope and Sequence Mathematics: Grades 5 to 10

First Quarter

SUBJECTS	W1	W2	W3	W4	W5	W6	W7	W8
MATH 5	Number and Number Sense	Four Basic Operations	Estimation with Four Basic Operations	Average; Mean, Median, Mode	Products and Multiples of the Powers of 10, GCF (Greatest Common Factor) & LCM (Least Common Multiple)		Divisibility Rules	Order of Operations
MATH 6	Number and Number Sense *with emphasis on exponents	Scientific Notation	GCF (Greatest Common Factor) & LCM (Least Common Multiple)	Addition and Subtraction of Rational Numbers	Multiplication and Division of Rational Numbers	Integers	Operations on Integers	Order of Operation with integers & Rational Numbers
MATH 7	Basic Idea of Sets	Set Operations	HCF (Highest Common Factor) & LCM (Least Common Multiple) *Scientific Notation	Square and Cube Roots	Real Number System, Absolute Value *with focus on integers	Operations on Integers	Rational Numbers; Multiplication and Division	Rational Numbers; Addition and Subtraction
MATH 8	Polynomials and Law of Exponents	Expansion of Algebraic Expressions	Factoring Algebraic Expressions	Solving Algebraic Expressions	Simplifying Rational Algebraic Expressions	Multiplying and Dividing Rational Algebraic Expressions	Adding and Subtracting Rational Algebraic Expressions	Problem Solving on Rational Algebraic Expressions
GEOMETRY 9	Solutions to Quadratic Equations: Factoring, Completing the Square, General Formula	Graph of Quadratic Functions	Parabola with Center at (o,o) and (h,k)	Vertex Form of the Parabola and Its Graph; $f(x) = a(x - h)^2 + k$	The roles of a, h, & k in the graph of $f(x) = a(x - h)^2 + k$ and a, b, c in $y = ax^2 + bx + c$	Direct, Indirect, Joint Variation		Radical Expression & Equation
	Arithmetic and	Polynomials	Operation on	Factoring	Absolute Value,	Distance	Midpoint of a	Slope and

ANALYTIC GEOMETRY 10	Geometric Sequence		Polynomials		Intervals, Cartesian Coordinate	Formula & Point of Division Formula	Line	Equation of a Line
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Second Quarter

SUBJECT	W1	W2	W3	W4	W5	W6	W7	W8	W9
MATH 5	Introduction to Fraction	Addition of Fractions and Mixed Numbers	Subtraction of Fractions and Mixed Numbers	Multiplication of Fractions and Mixed Numbers	Division of Fractions and Mixed Numbers	Introduction to Decimals	Operations on Decimals	Ratio, Rates, Proportion	Problem Solving
MATH 6	Introduction to Decimals	Addition and Subtraction of Decimals	Multiplication and Division of Decimals	Problem Solving on Decimals	Ratio and Rates	Proportion	Problem Solving: Ratio and Proportion	Introduction to Percentage	Problem Solving on Percentage
MATH 7	Measurement	Algebraic Expressions *Translating English Phrase to Math Symbols & Vice Versa	Law of Exponents	Introduction to Polynomials, Addition and Subtraction of Polynomials	Multiplication Polynomials	Special Products/ Algebraic Identities	Division of Polynomials	Linear Equation	Linear Inequalities
MATH 8	Coordinate Plane	Functions and Relations	Linear Equation in Two Variables and Graph	Slope and Constant Rate of Change	Constructing & Identifying Linear Functions	Parallel & Perpendicular Lines	Graph of Absolute Values & Solving System of Equations by Graphing	Solving System of Equations by Substitution and Elimination Method	Solving System of Inequalities
	Introduction to Geometry	Length of Line Segment	Gradient of a Straight Line	Equation of a Straight Line	Logic in Geometry	Direct Proof	Parallel Lines Cut by a	Parallel Lines and Angles	Proving ©Genesis R. Vital Parallel Lines

GEOMETRY 9							Transversal		
ANALYTIC GEOMETRY 10	Parallel and Perpendicular Lines	Graphing Linear and Absolute Value Inequalities	Solving System of Linear Equations by Graphing	Solving System of Linear Equations by Substitution Method	Solving System of Linear Equations by Elimination Method	Solving System of Inequalities	Equation of Circle with Center (o,o) & (h,k) and radius	Geometric Properties of Circles, Region on the Coordinate Plane	

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Third Quarter

SUBJECT	W1	W2	W3	W4	W5	W6	W7
MATH 5	Introduction to Percentage	Problems that Involve Percentage	Measurement	Focus on Time and Temperature	Patterns and Sequences	Angles and Angle Relationship	Polygon
MATH 6	Angles in Geometrical Figures	Exploring Spatial Figures	Area of Plane Figures	Area of Composite Figures	Surface Area	Volume of Solids	Volume of Liquids
MATH 7	Cartesian Plane & Graphs	Basic Geometric Concepts and Geometric Relations	Parallel and Perpendicular Lines		Parallel Lines Cut by a Transversal	Circle	Polygons; Exterior and Interior Angles
MATH 8	Radicals	Basic Geometric Concepts and Geometric Relations	Logic in Geometry	Direct Proof	Solving Corresponding Parts of Congruent Triangles	Proving Congruent Triangles	Triangle Inequalities
GEOMETRY 9	Similar and Proportional Triangles	Conditions for Congruent Triangles	CPCTC	Overlapping Triangles	Types of Quadrilaterals and their Properties	Solving Quadrilaterals	Proving in Quadrilaterals
ANALYTIC GEOMETRY 10	Parabola with Center at (o,o) that opens upward or downward	Parabola with Center at (o,o) that opens to the left or right	Parabola with center at (h,k)	Ellipse with Center at (o,o)	Ellipse with Center at (h,k)	Hyperbola with Center (o,o)	Hyperbola with Center (h,k)

Fourth Quarter

SUBJECT	W1	W2	W3	W4	W5	W6	W7	W8	W9
MATH 5	Circles and Its Parts	Solid Figures and Nets of Solids	Area of Plane Figures	Area of Composite Figures	Volume of Plane Figures	Volume of Composite Figures	Data Collection & Organization	Interpreting Graphs	Experimental Probability
MATH 6	Speed	Average Speed	Data Collection and Organization *Interpreting Graphs	Graph Construction	Focus on Pie Chart	Experimental & Theoretical Probability	Patterns and Sequences	Algebraic Expression	Equation
MATH 7	Introduction: Statistical Terminologies	Methods of Data Collection	Data Organization and Presentation		Summation Notation	Measures of Central Tendency		Measures of Variability	
MATH 8	Review of Statistical Concepts	Methods of Data Collection	Data Presentation and Organization	Measures of Central Tendency	Measures of Variability	Probability	Fundamental Counting Principle	Permutation	Combination
GEOMETRY 9	Mensuration; Area & Circumference of a Circle	Length of Arc & Area of Sector Radian		Tangent Lines and Tangent Circles	Angles formed by Tangents and Secants	Power Theorem	Geometric Constructions	Introduction to Matrix and Matrix Addition & Subtraction	Scalar Multiplication and Matrix Multiplication
ANALYTIC GEOMETRY 10	Exponential Function	inverse Function	Logarithmic Function	Definition of the Derivative	Basic Theorems on Differentiation		Composite Function and Chain Rule		Higher Order Derivatives