

Middle School Mathematics at a Glance

	6th Grade	7th Grade	8th Grade
Numbers and Operations	<ul style="list-style-type: none"> • Factors and multiples • Fundamental Theorem of Arithmetic • GCF and LCM • Compute with fractions and mixed numbers (unlike denominators) • Equivalent fractions, decimals, and percents 	<ul style="list-style-type: none"> • Absolute value • Compare & order rational numbers • Compute & solve problems with positive and negative rational numbers 	<ul style="list-style-type: none"> • Square roots of perfect squares • Rational vs Irrational numbers • Simplify expressions with integer exponents • Scientific Notation
Measurement	<ul style="list-style-type: none"> • Convert units using proportions • Volume of right rectangular prisms, right circular cylinders, pyramids and cones • Surface area of right rectangular prisms, right circular cylinders 		
Geometry	<ul style="list-style-type: none"> • Line & rotational symmetry • Ratio, proportion and scale factor with similar plane figures • Scale drawings • Compare/contrast right prisms/pyramids and cylinders/cones • Views of solid figures • Nets (prisms, cylinders, pyramids, and cones) 	<ul style="list-style-type: none"> • Basic constructions • Transformations • Properties of similarity • 3-D figures formed by translations & rotations in space • Cross sections of cones, cylinders, pyramids and prisms 	<ul style="list-style-type: none"> • Properties of parallel and perpendicular lines • Meaning of congruence • Pythagorean Theorem
Algebra	<ul style="list-style-type: none"> • Ratio for quantitative relationship • Write & solve proportions • Write & solve simple one-step equations 	<ul style="list-style-type: none"> • Algebraic expressions • Linear equations in one variable • Relationships between two variables 	<ul style="list-style-type: none"> • Represent, analyze, and solve problems • Inequalities in one variable • Graphs of linear equations and inequalities • Systems of linear equations and inequalities
Data Analysis and Probability	<ul style="list-style-type: none"> • Question, Collect Data, Make Graphs • Experimental/ Theoretical Probability • Predictions from investigations 	<ul style="list-style-type: none"> • Question, Collect Data, Make Graphs, Interpret results 	<ul style="list-style-type: none"> • Set theory • Tree Diagrams/ Counting Principles • Basic laws of probability • Organize, interpret, make inferences from data
Process Skills	Problem Solving, Arguments, Communicate, Connections, Multiple Representations	Problem Solving, Arguments, Communicate, Connections, Multiple Representations	Problem Solving, Arguments, Communicate, Connections, Multiple Representations