	Level 6	Level 7	Level 8	Level 9
Number and Operations in Base 10/The Number System	Understand the place value system	Understand ratio concepts and use ratio reasoning to solve problems	Analyze proportional relationships and use them to solve real-world and mathematical problems	
	Perform operations with multi-digit whole numbers and with decimals to hundredths	Compute fluently with multi-digit numbers and find common factors and multiples	Apply and extend previous understandings of operations with fractions to add, subtract and divide rational numbers	Know that there are numbers that are not rational, and approximate them by rational numbers
		Apply and extend previous understandings of numbers to the system of rational numbers	Know that there are numbers that are not rational and approximate them by rational numbers	
Number and Operations - Fractions	Use equivalent fractions as a strategy to add and subtract fractions			
	Apply and extend previous understandings of multiplication and division to multiply and divide fractions	Apply and extend previous understandings of multiplication and division to divide fractions by fractions		
Operations and Algebraic Thinking		Reason about and solve one-variable equations and inequalities		
				Work with radicals and integer exponents
	Write and interpret numerical expressions	Apply and extend previous understandings of arithmetic to algebraic expressions	Use properties of operations to generate equivalent expressions	Understand the connection between proportional relationships, lines, and linear equations
	Analyze patterns and relationships	Represent and analyze quantitative relationships between dependent and independent variables	Solve real-life and mathematical problems using numerical and algebraic expressions and equations	Analyze and solve linear equations and pairs of simultaneous linear equations
Functions				Define, evaluate, and compare functions
				Use functions to model relationships between quantities
Measurement and Data	Represent and interpret data – line plots	Develop understanding of statistical variability	Use random sampling to draw inferences about a population	Investigate patterns of association in bivariate data
		Summarize and describe distributions	Draw informal comparative inferences about two populations	
			Investigate chance processes and develop, se, and evaluate probability models	
	Convert like measurement units within a given measurement system			
	Understand concepts of volume and relate volume to multiplication and addition			
Geometry	Classify two-dimensional figures into categories based on their properties	Solve real-world and mathematical problems involving area, surface area, and volume	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	Understand the Pythagorean Theorem
			Solve real-life and mathematical problems involving volume of cylinders, cones and spheres	Solve real-world and mathematical problems involving volume of cylinders, cones and spheres
	Graph points on the coordinate plane to solve real-world and mathematical problems		Draw, construct and describe geometrical figures and describe the relationships between them	Understand congruence and similarity using physical models, transparencies, or geometry software