Analysis of *California Mathematics* Standards to *Common Core* Standards
Grade 7

Strand	CA Math Standard	Domain	Common Core Standard (CCS)	Alignment	Comments in reference to the CCS
Strand **Number Sense**	**CA Math Standard**				
1.0 Number Sense	1.0 Students know the properties of, and compute with, rational numbers expressed in a variety of forms.	The Number System	**7.NS: Cluster statement- Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers.** 7.NS.1: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers: present addition and subtraction on a horizontal or vertical number line. 7.NS.1a: Describe situations in which opposite quantities combine to make 0. 7.NS.1b: Understand $p + q$ as a number located |q| from p, is the positive or negative direction depending upon whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. 7.NS.1c: Understand subtraction of rational numbers as adding the additive inverse, $p – q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value f their difference, and apply this	Yes	

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			principal in real-world contexts. **7.NS.1d: Apply properties of operations as strategies to add and subtract rational numbers**. 7.NS.2a: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property leading to products such as (-1)(-1) = 1 and the rule for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. 7.NS.2b: Understand that integers can be divided, provided the divisor is not zero, and every quotient of integers (with non-zero divisors) is a rational number. If p and q are integers, then –(p/q) = (-p)/q = p/ (-q). Interpret quotients of rational numbers by describing real-world contexts. **7.NS.2c: Apply properties of operations as strategies to multiply and divide rational numbers.** 7.NS.2d: Convert a rational number to a decimal using long division: know that the decimal form of a rational number terminates in 0s or eventually repeats. 7.NS.3: Solve real-world problems involving the four operations with rational numbers.		

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	1.1 Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10) with approximate numbers using scientific notation.			No	8.EE.3: Use numbers expressed in the form of a single digit times an integer power to 10 to estimate very large or very small quantities, and to express how many times as much one is that the other. 8.EE.4: Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large and very small quantities. (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
	1.2 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers.	The Number System	7**.NS.1: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers: present addition and subtraction on a horizontal or vertical number line.** 7.NS.1a: Describe situations in which opposite quantities combine to make 0 **7.NS.1b: Understand $p + q$ as a number located |q| from p, is the positive or negative direction depending upon whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.** **7.NS.1c: Understand subtraction of rational numbers as adding**	Yes	8.EE.1: Know and apply the properties of integer exponents to generate equivalent numerical expressions.

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			the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value f their difference, and apply this principal in real-world contexts. **7.NS-1d: Apply properties of operations as strategies to add and subtract rational numbers.** 7.NS.2: Apply and extend previous understandings of multiplication and division of fractions to multiply and divide rational numbers: present addition and subtraction on a horizontal or vertical number line. 7.NS.2a: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property leading to products such as (-1)(-1) = 1 and the rule for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. 7.NS.2b: Understand that integers can be divided, provided the divisor is not zero, and every quotient of integers (with non-zero divisors) is a rational number. If p and q are integers, then –(p/q) = (-p)/q = p/ (-q). Interpret quotients of rational numbers by describing real-world contexts.		

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			7.NS.2c: Apply properties of operations as strategies to multiply and divide rational numbers. 7.NS.2d: Convert a rational number to a decimal using long division: know that the decimal form of a rational number terminates in 0s or eventually repeats.		
	1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.	The Number System	7.NS.2: Apply and extend previous understandings of multiplication and division of fractions to multiply and divide rational numbers: present addition and subtraction on a horizontal or vertical number line. 7.NS.2a: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property leading to products such as (-1)(-1) = 1 and the rule for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. 7.NS.2b: Understand that integers can be divided, provided the divisor is not zero, and every quotient of integers (with non-zero divisors) is a rational number. If p and q are integers, then –(p/q) = (-p)/q = p/ (-q). Interpret quotients of rational numbers by describing real-world contexts.	Partial	CCS does not include converting fractions to percents.

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			7.NS.2c: Apply properties of operations as strategies to multiply and divide rational numbers. **7.NS.2d: Convert a rational number to a decimal using long division: know that the decimal form of a rational number terminates in 0s or eventually repeats.**		
		Expressions and Equations	7.EE.2: Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities are related. 7.EE.3: Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation or estimation strategies.		
	1.4 Differentiate between rational and irrational numbers.			No	8.NS.1: Understand informally that every number has a decimal expansion: the rational numbers are those with decimal expansions that terminate in 0s or eventually repeat. Know that other numbers are called irrational.
	1.5 Know that every rational number is either a terminating or repeating decimal and be able to convert terminating decimals into reduced fractions.	The Number System	7.NS.2: Apply and extend previous understandings of multiplication and division of fractions to multiply and divide rational numbers: present addition and subtraction on a horizontal or vertical number line.	Yes	

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			7.NS.2a: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property leading to products such as (-1)(-1) = 1 and the rule for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. 7.NS.2b: Understand that integers can be divided, provided the divisor is not zero, and every quotient of integers (with non-zero divisors) is a rational number. If p and q are integers, then –(p/q) = (-p)/q = p/ (-q). Interpret quotients of rational numbers by describing real-world contexts. 7.NS.2c: Apply properties of operations as strategies to multiply and divide rational numbers. **7.NS.2d: Convert a rational number to a decimal using long division: know that the decimal form of a rational number terminates in 0s or eventually repeats.**		
	1.6 Calculate the percentage of increases and decreases of a quantity.	Ratios and Proportional Relationships	7.RP.3: Uses proportional relationships to solve multistep ratio and percent problems.	Yes	
	1.7 Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest.	Ratios and Proportional Relationships	7.RP.3: Uses proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease,*	Partial	CCS does not reference compound interest. Example included because it clarifies the standard.

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			percent error.		
2.0 Number Sense	2.0 Students use exponents, powers, and roots and use exponents in working with fractions.			No	Fractions are not specifically mentioned. 8.EE: Cluster statement- Work with radicals and integer exponents.
	2.1 Understand negative whole-number exponents. Multiply and divide expressions involving exponents with a common base.			No	8.EE.1: Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,* $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$. CCS example is included to clarify the standard.
	2.2 Add and subtract fractions by using factoring to find common denominators.			No	6.NS.4: Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. 5.NF.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. CCS does not specifically mention using factoring to find common denominators.
	2.3 Multiply, divide, and simplify rational numbers by using exponent rules.	Expressions and Equations		No	8.EE.1: Know and apply the properties of integer exponents to generate equivalent numerical expressions.

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	2.4 Use the inverse relationship between raising to a power and extracting the root of a perfect square integer; for an integer that is not square, determine without a calculator the two integers between which its square root lies and explain why.			No	8.NS.2: Use rational approximations of irrational number to compare size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations. 8.EE.2: Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube toots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
	2.5 Understand the meaning of the absolute value of a number; interpret the absolute value as the distance of the number from zero on a number line; and determine the absolute value of real numbers.	The Number System	7.NS.1: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers: present addition and subtraction on a horizontal or vertical number line. 7.NS.1a: Describe situations in which opposite quantities combine to make 0. **7.NS.1b: Understand *p* + *q* as a number located |q| from p, is the positive or negative direction depending upon whether *q* is positive or negative. Show that a number an its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.** **7.NS.1c: Understand subtraction**	Partial	**6.NS.7: Understand ordering and absolute value of rational numbers.** 6.NS.7a: Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. 6.NS.7b: Write, interpret, and explain statements of order for rational numbers in real-world contexts. **6.NS.7c: Understand the absolute value of a rational number as its distance from 0 to the number line; interpret absolute value as magnitude for a positive or negative quantity in a real world situation.** **6.NS.7d: Distinguish comparisons of absolute value from statements about order.**

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			of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value f their difference, and apply this principal in real-world contexts. 7.NS.1d: Apply properties of operations as strategies to add and subtract rational numbers.		6.NS.8: Solve real-world and mathematical problems by graphing points in all four quadrants. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.
Strand **Algebra and Functions**	**CA Math Standard**				
1.0 Algebra and Functions	1.0 Students express quantitative relationships by using algebraic terminology, expressions, equations, inequalities, and graphs.	Expressions and Equations	**7.EE: Cluster statement- Solve real-life and mathematical problems using numerical and algebraic expression and equations.** 7.EE.4a: Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. 7.EE.4b: Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$ where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. **7.EE.4b: Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$,**	Yes	

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			where *p*, *q*, and *r* are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.		
	1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A).	Expressions and Equations	7.EE.4: Use variables to represent quantities in a real-world and mathematical problems and construct simple equations and inequalities to solve problems about the quantities.	Partial	6.EE.6: Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. 6.EE.8: Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams. 6.EE.9: Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable in terms of the independent variable. Analyze the relationship between the independent and dependent variables using graphs and tables and relate these to the equations.
	1.2 Use the correct order of operations to evaluate algebraic expressions such as $3(2x + 5)^2$.	Expressions and Equations Expressions and Equations	7.EE.1: Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Yes	
	1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used.	Expressions and Equations	7.EE.1: Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Yes	

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		Mathematical Practices	MP.3: Construct viable arguments and critique the reasoning of others.		
	1.4 Use algebraic terminology (e.g., variable, equation, term, coefficient, inequality, expression, constant) correctly.	Expressions and Equations	6.EE.2: Write, read, and evaluate expressions involving whole-number exponents. 6.EE.2a: Write expressions that record operations with numbers and with letters standing for numbers. **6.EE.2b: Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.** 6.EE.2c: Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-word problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).	Yes	
	1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph.			No	6.EE.9: Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable in terms of the independent variable. Analyze the relationship between the independent and dependent variables using graphs and tables and relate these to the equations.

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2.0 Algebra and Functions	2.0 Students interpret and evaluate expressions involving integer powers and simple roots.			No	8.EE: Cluster statement- Work with radicals and integer exponents.
	2.1 Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication by the multiplicative inverse. Simplify and evaluate expressions that include exponents.			No	There is no mention of "Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication by the multiplicative inverse." 6.EE.2: Write, read, and evaluate expressions involving whole-number exponents. 6.EE.2a: Write expressions that record operations with numbers and with letters standing for numbers. 6.EE.2b: Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. **6.EE.2c: Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-word problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).** 6.EE.3: Apply the properties of operations to generate equivalent expressions.
	2.2 Multiply and divide monomials; extend the process of taking powers and extracting roots to monomials			No	

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	when the latter results in a monomial with an integer exponent.				
3.0 Algebra and Functions	Students graph and interpret linear and some nonlinear functions.	Functions		No	8.F: Cluster statement- Use functions to model relationships between quantities. 8.F.1: Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. 8.F.2: Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions.) 8.F.3: Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
	3.1 Graph functions of the form $y = nx^2$ and $y = nx^3$ and use in solving problems.			No	
	3.2 Plot the values from the volumes of three-dimensional shapes for various values of the edge lengths (e.g., cubes with varying edge lengths or a triangle prism with a fixed height and an equilateral triangle base of varying lengths).			No	
	3.3 Graph linear functions, noting that the vertical change (change in *y*- value) per unit of horizontal change (change in *x*- value) is always the same and know that the ratio ("rise over run") is called the slope of a graph.			No	8.EE.5: Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. 8.EE.6: Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a

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					line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at *b*.
	3.4 Plot the values of quantities whose ratios are always the same (e.g., cost to the number of an item, feet to inches, circumference to diameter of a circle). Fit a line to the plot and understand that the slope of the line equals the quantities.			No	8.EE.5: Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. 8.SP.2: Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
4.0 Algebra and Functions	4.0 Students solve simple linear equations and inequalities over the rational numbers.	Expressions and Equations	7.EE: Cluster statement-Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	Partial	8.EE.7: Solve linear equations in one variable.
	4.1 Solve two-step linear equations and inequalities in one variable over the rational numbers, interpret the solution or solutions in the context from which they arose, and verify the reasonableness of the results.	Expressions and Equations	7.EE.4: Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. 7**.EE.4a: Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.**	Yes	

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			7.EE.4b: Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$ where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.		
		Mathematical Practices	7.MP.1: Make sense of problems and preserve in solving them.		
	4.2 Solve multi step problems involving rate, average speed, distance, and time or a direct variation.			No	CCS does not specifically reference average speed, distance, and time. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. **6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed**. 6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. 6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

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Strand Measurement and Geometry	**CA Math Standard**				
1.0 Measurement and Geometry	1.0 Students choose appropriate units of measure and use ratios to convert within and between measurement systems to solve problems.			No	CCS does not reference conversion between measurement systems. 5.MD: Cluster statement- Convert like measurement units within a given measurement system. 5.MD.1: Convert among different-sized measurement units within a given measurement system and use these conversions in solving multi-step, real world problems. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed. 6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. 6.RP.3d: Use ratio reasoning to convert measurement units;

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					manipulate and transform units appropriately when multiplying or dividing quantities.
	1.1 Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters).			No	CCS does not reference comparing measurement systems. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed. 6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. 6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
	1.2 Construct and read drawings and models made to scale.	Geometry	7.G1: Solve problems involving scale drawings of geometric figures, including actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Yes	

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	1.3 Use measures expressed as rates (e.g., speed, density) and measures expressed as products (e.g., person-days) to solve problems; check the units of the solutions; and use dimensional analysis to check the reasonableness of the answer.	Ratios and Proportional Reasoning	6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed. 6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. **6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.**	Partial	CCS does not reference dimensional analysis.
2.0 Measurement and Geometry	2.0 Students compute the perimeter, area, and volume of common geometric objects and use the results to find measures of less common objects. They know how perimeter, area, and volume are affected by changes of scale.	Geometry	7.G.6: Solve real world and mathematical problems involving area, volume and surface area of two-and three- dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.	Partial	CCS does not reference how perimeter, area, and volume are affected by changes of scale.

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	2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders.	Geometry	7. G.4: Know the formulas for the area and circumference of a circle and use them to solve problems: give an informal derivation of the relationship between the circumference and area of a circle. 7.G.6: Solve real world and mathematical problems involving area, volume and surface area of two-and three- dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.	Partial	8.G.9: Know the formulas for volumes of cone, cylinders, and spheres and use them to solve real-world and mathematical problems.
	2.2 Estimate and compute the area of more complex or irregular two-and three-dimensional figures by breaking the figures down into more basic geometric objects.	Geometry	7.G.6: Solve real world and mathematical problems involving area, volume and surface area of two-and three- dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.	Partial	6.G.1: Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes: apply these techniques in the context of solving real-world and mathematical problems.
	2.3 Compute the length of the perimeter, the surface area of the faces, and the volume of a three-dimensional object built from rectangular solids. Understand that when the lengths of all dimensions are multiplied by a scale factor, the surface area is multiplied by the square of the scale factor and the volume is multiplied by the cube of the scale factor.	Geometry	7.G.6: Solve real world and mathematical problems involving area, volume and surface area of two-and three- dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.	Partial	Does not mention using an "object built from rectangular solids" or the two scale factor conditions.
	2.4 Relate the changes in measurement with a change of scale to the units used (e.g., square inches, cubic feet) and to conversions between units (1 square foot = 144 square inches or [1 ft^2] = [144 in^2], 1 cubic inch is approximately 16.38 cubic centimeters or [1 in^3] = [16.38 cm^3]).			No	CCS does not reference change of scale to the units used. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations.

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					6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed. 6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. **6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.**
3.0 Measurement and Geometry	3.0 Students know the Pythagorean theorem and deepen their understanding of plane and solid geometric shapes by constructing figures that meet given conditions and by identifying attributes of figures.			No	CCS does not reference by identifying attributes of figures. 8.G: Geometry Cluster statement-Understand and apply the Pythagorean Theorem.
	3.1 Identify and construct basic elements of geometric figures (e.g., altitudes, mid-points, diagonals, angle bisectors, and perpendicular bisectors; central angles, radii, diameters, and chords of circles) by using a compass and straightedge.			No	
	3.2 Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their image under translations and reflections.	Geometry		No	6.G.3: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving

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					real-world and mathematical problems. 8.G.2: Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. 8.G.3: Describe the effect of dilations, translations, rotations, and reflections of two-dimensional figures using coordinates. 8.G.4: Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
	3.3 Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement.			No	8.G.6: Explain a proof of the Pythagorean Theorem and its converse. 8.G.7: Apply the Pythagorean Theorem to determine unknown side lengths in right triangle in real-world and mathematical problems in two and three dimensions.
	3.4 Demonstrate an understanding of conditions that indicate two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures.			No	8.G.2: Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

Strand	CA Math Standard	Domain	Common Core Standard (CCS)	Alignment	Comments in reference to the CCS
	3.5 Construct two-dimensional patterns for three-dimensional models, such as cylinders, prisms, and cones.			No	6.G.4: Represent three-dimensional figures using nets made up of rectangles and triangles, and use nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
	3.6 Identify elements of three-dimensional geometric objects (e.g., diagonals of rectangular solids) and describe how two or more objects are related in space (e.g., skew lines, the possible ways three planes might intersect).			No	
Strand Statistics, Data Analysis, and Probability	**CA Math Standard**				
1.0 Statistics, Data Analysis, and Probability	1.0 Students collect, organize, and represent data sets that have one or more variables and identify relationships among variables within a data set by hand and through the use of an electronic spreadsheet software program.	Statistics and Probability	7.SP.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variations in estimates of predictions.	Partial	8.SP.4: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two- way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.
	1.1 Know various forms of display for data sets, including a stem-and-leaf plot or box-and-whisker plot; use the forms to display a single set of data or to compare two sets of data.	Statistics and Probability		No	6.SP.4: Display numerical data in plots on a number line, including dot plots, histograms, and box plots. 6.SP.5: Summarize numerical sets of data in relation to their context.

Strand	CA Math Standard	Domain	Common Core Standard (CCS)	Alignment	Comments in reference to the CCS
	1.2 Represent two numerical variables on a scatter plot and informally describe how the data points are distributed and any apparent relationship that exists between the two variables (e.g., between time spent on homework and grade level).	Statistics and Probability	7.SP.3: Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. 7.SP.4: Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.	Partial	8.SP.1: Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering outliers, positive or negative association, linear association, and nonlinear association.
	1.3 Understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set.			No	6.SP.5: Summarize numerical data sets in relation to their context, such as by: 6.SP.5a: Reporting the number of observations. 6.SP.5b: Describing the nature of the attribute under investigation, including how it was measured and its units of measurements. 6.SP.5c: Summarize numerical data sets in relation to their context by giving quantitative measures of center (median and/or mean) and variability) interquartile range and/or mean absolute deviation) as well as describing any overall pattern with reference to the context in which the data were given. 6.SP.5d: Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

Strand	CA Math Standard	Domain	Common Core Standard (CCS)	Alignment	Comments in reference to the CCS
Strand Mathematical Reasoning	**CA Math Standard**				
1.0 Mathematical Reasoning	1.0 Students make decisions about how to approach problems.	Mathematical Practices	7.MP.1: Make sense of problems and preserve in solving them.	Yes	
	1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.	Mathematical Practices	7.MP.7: Look for and make use of structure. 7.MP.8: Look for and express regularity in repeated reasoning.	Yes	
	1.2 Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.	Mathematical Practices	7.MP.2: Reason abstractly and quantitatively. 7.MP.3: Construct viable arguments and critique the reasoning of others.	Yes	
	1.3 Determine when and how to break a problem into simpler parts.	Mathematical Practices	7.MP.1: Make sense of problems and preserve in solving them. 7.MP.7: Look for and make use of structure.	Yes	
2.0 Mathematical Reasoning	2.0 Students use strategies, skills, and concepts in finding solutions.	Mathematical Practices	7.MP.1: Make sense of problems and preserve in solving them. 7.MP.5: Use appropriate tools strategically. 7.MP.7: Look for and make use of structure. 7.MP.8: Look for and express regularity in repeated reasoning.	Yes	
	2.1 Use estimation to verify the reasonableness of calculated results.	Mathematical Practices	7.MP.1: Make sense of problems and preserve in solving them. 7.MP.2: Reason abstractly and quantitatively.	Yes	
	2.2 Apply strategies and results from simpler problems to more complex problems.	Mathematical Practices	7.MP.7: Look for and make use of structure. 7.MP.8: Look for and express regularity in repeated reasoning.	Yes	

Strand	CA Math Standard	Domain	Common Core Standard (CCS)	Alignment	Comments in reference to the CCS
	2.3 Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.	Mathematical Practices	7.MP.2: Reason abstractly and quantitatively. 7.MP.5: Use appropriate tools strategically. 7.MP.7: Look for and make use of structure. 7.MP.8: Look for and express regularity in repeated reasoning.	Yes	
	2.4 Make and test conjectures by using both inductive and deductive reasoning.	Mathematical Practices	7.MP.2: Reason abstractly and quantitatively. 7.MP.3: Construct valid arguments and critique the reasoning of others.	Yes	
	2.5 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.	Mathematical Practices	7.MP.4: Model with mathematics.	Yes	
	2.6 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.	Mathematical Practices	7.MP.6: Attend to precision.	Yes	
	2.7 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	Mathematical Practices	7.MP.6: Attend to precision.	Yes	
	2.8 Make precise calculations and check the validity of the results from the context of the problem.	Mathematical Practices	7.MP.6: Attend to precision.	Yes	
3.0 Mathematical Reasoning	3.0 Students determine a solution is complete and move beyond a particular problem by generalizing to other situations.	Mathematical Practices	7.MP.8: Look for and express regularity in repeated reasoning.	Yes	
	3.1 Evaluate the reasonableness of the solution in the context of the original situation.	Mathematical Practices	7.MP.2: Reason abstractly and quantitatively.	Yes	

Strand	CA Math Standard	Domain	Common Core Standard (CCS)	Alignment	Comments in reference to the CCS
			7.MP.3: Construct viable arguments and critique the reasoning of others.		
	3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.	Mathematical Practices	7.MP.8: Look for and express regularity in repeated reasoning.	Yes	
	3.3 Develop generalizations of the results obtained and the strategies used and apply them to new problem situations.	Mathematical Practices	7.MP.5: Use appropriate tools strategically. 7.MP.7: Look for and make use of structure. 7.MP.8: Look for and express regularity in repeated reasoning.	Yes	

Grade 7 Common Core Standards not found in 7th Grade CA Mathematics Standards

Domain	Common Core standard	Found in CA Math standards
Ratios and Proportional Reasoning	7.RP.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units	Yes 6th Grade- NS 1.2
Ratios and Proportional Reasoning	7.RP.2: Recognize and represent proportional relationships between quantities.	Yes 6th Grade- NS 1.2
Ratios and Proportional Reasoning	7.RP.2a: Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.	Yes 6th Grade- NS 1.3 and AF 2.2
Ratios and Proportional Reasoning	7.RP.2b: Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Yes 6th Grade- AF 2.0
Ratios and Proportional Reasoning	7.RP.2c: Represent proportional relationships by equations.	Yes 6th Grade- NS 1.3
Ratios and Proportional Reasoning	7.RP.2d: Explain what a point (*x, y)* on the graph of proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, *r)* where *r* is the unit rate.	Yes 6th Grade- AF 2.0
Geometry	7.G.2: Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	Yes 6th Grade- MG 2.3
Geometry	7.G.3: Describe the two-dimensional figures that result from slicing three-dimensional figure, as in plane sections of right rectangular prisms and right triangular prisms.	No
Geometry	7.G.5: Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Yes 6th Grade- MG 2.3
Statistics and Probability	7.SP.1: Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population for a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	Yes 6th Grade- SDAP 2.1 and 2.2
Statistics and Probability	7.SP.5: Understand that the probability of a chance event is a number between o and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around ½ indicates an event is neither unlikely or likely, and a probability near 1 indicates a likely event.	Yes 6th Grade- SDAP 3.3
Statistics and Probability	7.SP.6: Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.	Yes 6th Grade- SDAP 3.0 and 3.2
Statistics and Probability	7.SP.7: Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain	Yes 6th Grade- SDAP 3.0

Domain	Common Core standard	Found in CA Math standards
	possible sources of the discrepancy.	
Statistics and Probability	7. SP.7a: Develop uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.	Yes 6th Grade- SDAP 3.0
Statistics and Probability	7. SP.7b: Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.	
Statistics and Probability	7. SP.8: Find probabilities of compound events using organized list, tables, tree diagrams, and simulation.	Yes 6th Grade- SDAP 3.1
Statistics and Probability	7. SP.8a: Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.	Yes 6th Grade- SDAP 3.1 and 3.4
Statistics and Probability	7. SP.8b: Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g.," rolling double sixes"), identify the outcomes in the sample space which compose the event.	Yes 6th Grade- SDAP 3.1
Statistics and Probability	7. SP.8c: Design and use a simulation to generate frequencies for compound events.	6th Grade- SDAP 3.0

Grade 7 CA Mathematics Standards not found in the 7th grade Common Core Standards

Strand	CA Math Standard	Found in Common Core Standards
1.0 Number Sense	1.1 Read, write, and compare rational numbers in scientific notation (positive and negative powers of 10) with approximate numbers using scientific notation.	Yes. 8.EE.3: Use numbers expressed in the form of a single digit times an integer power to 10 to estimate very large or very small quantities, and to express how many times as much one is that the other. 8.EE.4: Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large and very small quantities. (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
1.0 Number Sense	1.4 Differentiate between rational and irrational numbers.	Yes. 8.NS.1: Understand informally that every number has a decimal expansion: the rational numbers are those with decimal expansions that terminate in 0s or eventually repeat. Know that other numbers are called irrational.
2.0 Number Sense	2.0 Students use exponents, powers, and roots and use exponents in working with fractions.	Yes. Fractions are not specifically mentioned. 8.EE: Cluster statement- Work with radicals and integer exponents.
2.0 Number Sense	2.1 Understand negative whole-number exponents. Multiply and divide expressions involving exponents with a common base.	Yes. CCS example is included to clarify the standard. 8.EE.1: Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,* $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.
2.0 Number Sense	2.2 Add and subtract fractions by using factoring to find common denominators.	Yes. CCS does not specifically mention using factoring to find common denominators. 6.NS.4: Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. 5.NF.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

Strand	CA Math Standard	Found in Common Core Standards
2.0 Number Sense	2.3 Multiply, divide, and simplify rational numbers by using exponent rules.	Yes. 8.EE.1: Know and apply the properties of integer exponents to generate equivalent numerical expressions.
2.0 Number Sense	2.4 Use the inverse relationship between raising to a power and extracting the root of a perfect square integer; for an integer that is not square, determine without a calculator the two integers between which its square root lies and explain why.	Yes. 8.NS.2: Use rational approximations of irrational number to compare size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations. 8.EE.2: Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube toots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
1.0 Algebra and Functions	1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph.	Yes. 6.EE.9: Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable in terms of the independent variable. Analyze the relationship between the independent and dependent variables using graphs and tables and relate these to the equations.
2.0 Algebra and Functions	2.0 Students interpret and evaluate expressions involving integer powers and simple roots.	Yes. 8.EE: Cluster statement- Work with radicals and integer exponents.
2.0 Algebra and Functions	2.1 Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication by the multiplicative inverse. Simplify and evaluate expressions that include exponents.	Yes. There is no mention of "Interpret positive whole-number powers as repeated multiplication and negative whole-number powers as repeated division or multiplication by the multiplicative inverse." 6.EE.2: Write, read, and evaluate expressions involving whole-number exponents. 6.EE.2a: Write expressions that record operations with numbers and with letters standing for numbers. 6.EE.2b: Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. **6.EE.2c: Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-word problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).** 6.EE.3: Apply the properties of operations to generate equivalent expressions.

Strand	CA Math Standard	Found in Common Core Standards
2.0 Algebra and Functions	2.2 Multiply and divide monomials; extend the process of taking powers and extracting roots to monomials when the latter results in a monomial with an integer exponent.	
3.0 Algebra and Functions	Students graph and interpret linear and some nonlinear functions.	Yes. 8.F: Cluster statement- Use functions to model relationships between quantities. 8.F.1: Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. 8.F.2: Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions.) 8.F.3: Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.
3.0 Algebra and Functions	3.1 Graph functions of the form $y = nx^2$ and $y = nx^3$ and use in solving problems.	No.
3.0 Algebra and Functions	3.2 Plot the values from the volumes of three-dimensional shapes for various values of the edge lengths (e.g., cubes with varying edge lengths or a triangle prism with a fixed height and an equilateral triangle base of varying lengths).	No.
3.0 Algebra and Functions	3.3 Graph linear functions, noting that the vertical change (change in *y*- value) per unit of horizontal change (change in *x*- value) is always the same and know that the ratio ("rise over run") is called the slope of a graph.	Yes. 8.EE.5: Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. 8.EE.6: Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at *b*.
3.0 Algebra and Functions	3.4 Plot the values of quantities whose ratios are always the same (e.g., cost to the number of an item, feet to inches, circumference to diameter of a circle). Fit a line to the plot and understand that the slope of the line equals the quantities.	Yes. 8.EE.5: Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. 8.SP.2: Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.

Strand	CA Math Standard	Found in Common Core Standards
4.0 Algebra and Functions	4.2 Solve multi step problems involving rate, average speed, distance, and time or a direct variation.	Yes. CCS does not specifically reference average speed, distance, and time. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. **6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed**. 6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. 6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
1.0 Measurement and Geometry	1.0 Students choose appropriate units of measure and use ratios to convert within and between measurement systems to solve problems.	Yes. CCS does not reference conversion between measurement systems. 5.MD: Cluster statement- Convert like measurement units within a given measurement system. 5.MD.1: Convert among different-sized measurement units within a given measurement system and use these conversions in solving multi-step, real world problems. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed.

Strand	CA Math Standard	Found in Common Core Standards
		6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. 6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
	1.1 Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters).	Yes. CCS does not reference comparing measurement systems. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed. 6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. 6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.
2.0 Measurement and Geometry	2.4 Relate the changes in measurement with a change of scale to the units used (e.g., square inches, cubic feet) and to conversions between units (1 square foot = 144 square inches or [1 ft^2] = [144 in^2], 1 cubic inch is approximately 16.38 cubic centimeters or [1 in^3] = [16.38 cm^3]).	Yes. CCS does not reference change of scale to the units used. 6.RP.3: Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables or equivalent ratios, tape diagrams, double number line diagrams or equations. 6.RP.3a: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 6. RP.3b: Solve unit rate problems including those involving unit pricing and constant speed.

Strand	CA Math Standard	Found in Common Core Standards
		6.RP.3c: Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. **6.RP.3d: Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.**
3.0 Measurement and Geometry	3.0 Students know the Pythagorean theorem and deepen their understanding of plane and solid geometric shapes by constructing figures that meet given conditions and by identifying attributes of figures.	Yes. CCS does not reference by identifying attributes of figures. 8.G: Geometry Cluster statement- Understand and apply the Pythagorean Theorem.
3.0 Measurement and Geometry	3.1 Identify and construct basic elements of geometric figures (e.g., altitudes, mid-points, diagonals, angle bisectors, and perpendicular bisectors; central angles, radii, diameters, and chords of circles) by using a compass and straightedge.	No.
3.0 Measurement and Geometry	3.2 Understand and use coordinate graphs to plot simple figures, determine lengths and areas related to them, and determine their image under translations and reflections.	Yes. 6.G.3: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems. 8.G.2: Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. 8.G.3: Describe the effect of dilations, translations, rotations, and reflections of two-dimensional figures using coordinates. 8.G.4: Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
3.0 Measurement and Geometry	3.3 Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement.	Yes. 8.G.6: Explain a proof of the Pythagorean Theorem and its converse. 8.G.7: Apply the Pythagorean Theorem to determine unknown side lengths in right triangle in real-world and mathematical problems in two and three dimensions.

Strand	CA Math Standard	Found in Common Core Standards
3.0 Measurement and Geometry	3.4 Demonstrate an understanding of conditions that indicate two geometrical figures are congruent and what congruence means about the relationships between the sides and angles of the two figures.	Yes. 8.G.2: Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
3.0 Measurement and Geometry	3.5 Construct two-dimensional patterns for three-dimensional models, such as cylinders, prisms, and cones.	Yes. 6.G.4: Represent three-dimensional figures using nets made up of rectangles and triangles, and use nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
3.0 Measurement and Geometry	3.6 Identify elements of three- dimensional geometric objects (e.g., diagonals of rectangular solids) and describe how two or more objects are related in space (e.g., skew lines, the possible ways three planes might intersect).	No.
1.0 Statistics, Data Analysis, and Probability	1.1 Know various forms of display for data sets, including a stem-and-leaf plot or box-and-whisker plot; use the forms to display a single set of data or to compare two sets of data.	Yes. 6.SP.4: Display numerical data in plots on a number line, including dot plots, histograms, and box plots. 6.SP.5: Summarize numerical sets of data in relation to their context
	1.3 Understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set.	Yes. 6.SP.5: Summarize numerical data sets in relation to their context, such as by: 6.SP.5a: Reporting the number of observations. 6.SP.5b: Describing the nature of the attribute under investigation, including how it was measured and its units of measurements. 6.SP.5c: Summarize numerical data sets in relation to their context by giving quantitative measures of center (median and/or mean) and variability) interquartile range and/or mean absolute deviation) as well as describing any overall pattern with reference to the context in which the data were given. 6.SP.5d: Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.