

Grade 7 \* 8 Content Standards – Math (Algebra Readiness)

Standard	CST	CHSEE	Framework Emphasis	Algebra Readiness	Essential Standards	Essential Standards	
						S1	S2
<b>Number Sense</b>	<b>22 / 34%</b>	<b>14</b>					
<b>1.0 Students know the properties of, and compute with, rational numbers expressed in a variety of forms:</b>	<b>***14</b>	<b>***9</b>					
1.2 Add, subtract, multiply, and divide rational numbers (integers, fractions, and terminating decimals) and take positive rational numbers to whole-number powers.	4	3	★	👍	✓	<b>F</b>	<b>R</b>
1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.	1	2					
1.5 Know that every rational number is either a terminating or repeating decimal and be able to convert terminating decimals into reduced fractions.	1		★			<b>F</b>	<b>R</b>
<b>Standard Set 2.0 Students use exponents, powers, and roots and use exponents in working with fractions:</b>	<b>***8</b>	<b>5</b>					
2.1 Understand negative whole-number exponents. Multiply and divide expressions involving exponents with a common base.	1	1		👍			
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.	2	1	★	👍	✓	<b>F</b>	<b>R</b>
<b>Algebra and Functions</b>	<b>25 / 38%</b>	<b>17</b>					
<b>Standard Set 1.0 Students express quantitative relationships by using algebraic terminology, expressions, equations, inequalities, and graphs:</b>	<b>***8</b>	<b>6</b>					
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).	1	2		👍		<b>F</b>	<b>R</b>
1.3 Simplify numerical expressions by applying properties of rational numbers (e.g., identity, inverse, distributive, associative, commutative) and justify the process used.	5		★	👍	✓	<b>F</b>	<b>R</b>
<b>Standard Set 2.0 Students interpret and evaluate expressions involving integer powers and simple roots:</b>	<b>***2</b>	<b>2</b>					
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.	1	1		👍			
<b>Standard Set 3.0 Students graph and interpret linear and some nonlinear functions:</b>	<b>***5</b>	<b>4</b>					
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.	2	2	★	👍	✓		<b>F</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.	2	1	★	👍	✓		<b>F</b>
<b>Standard Set 4.0 Students solve simple linear equations and inequalities over the rational numbers:</b>	<b>***10</b>	<b>5</b>	★				

F = Focus Standard for Semester  
R = Re-evaluate Standard

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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.	5	3	★	👍	✓		F
4.2 Solve multistep problems involving rate, average speed, distance, and time or a direct variation.	5	2	★	👍	✓		F
<b>Measurement and Geometry</b>	<b>13 / 20%</b>	<b>17</b>					
<b>Standard Set 1.0 Students choose appropriate units of measure and use ratios to convert within and between measurement systems to solve problems:</b>	<b>***4</b>	<b>5</b>					
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.	3	2	★	👍	✓	F	R
<b>Standard Set 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:</b>	<b>***8</b>	<b>5</b>					
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.	4	2	★	👍	✓		F
<b>Algebra I</b>	<b>65 / 100%</b>	<b>12</b>					
<b>Standard Set 1.0 Students identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable:</b>	<b>***1</b>	<b>***1</b>					
2.0 Students understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents.	4	1	★	👍	✓		F
4.0 Students simplify expressions prior to solving linear equations and inequalities in one variable, such as $3(2x-5) + 4(x-2) = 12$ .	3	2	★	👍	✓		F
5.0 Students solve multistep problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	6	1	★	👍	✓		F

\*\* Fractional values indicate rotated standards (e.g., 1/2 = rotated every two years)

\*\*\* Indicates total number for standard

★ Identifies the key standards according to Mathematics Framework for California Public Schools.

👍 Identifies Algebra Readiness

First Trimester Test = Approximately 15 question  
 Second Trimester Test = Approximately 15 questions  
 Third Trimester Test = Approximately 58 questions