Std	Standards Unpacked	# on CST
5.0	Students solve multi-step linear equations in one variable. (3-3, 3-5, 3-6, 3-7, 11-9) Students solve multi-step linear word problems in one variable. (3-4, 3-11) Students solve multi-step linear inequalities in one variable. (4-4, 9-2) Students solve multi-step word problems involving linear inequalities in one variable. (4-5) Students provide justification for each step in multi-step equations. (3-3 p128 #43-46) Students provide justification for each step in multi-step inequalities. (4-4 p185 #52-55)	6
9.0	Students solve a system of two linear equations in two variables algebraically. (8-2, 8-3, 8-4, 8-6) Students are able to interpret the answer of a system of two linear equations in two variables graphically. (8-1) Students are able to solve a system of two linear inequalities in two variables. (9-6) Students are able to sketch the solution sets of two linear inequalities in two variables. (9-6)	5
2.0	**Students understand the operations of:** a) taking the opposite (2-8) b) finding the reciprocal (2-6) c) taking a root (11-1 thru 11-8) d) raising to a fractional power (11-5 p503) e) exponents (1-3, 5-1, 5-2) **Students use the operations of:** a) taking the opposite (2-8) b) finding the reciprocal (2-6) c) taking a root (11-1 thru 11-8) d) raising to a fractional power (11-5 p503) e) exponents (1-3, 5-1, 5-2)	4
6.0	Students graph a linear equation. (7-2, 7-3, 7-4, 7-5) Students compute the *x*-intercept (e.g., graph $2x + 6y = 4$). (7-3) Students compute the y-intercept (e.g., graph $2x + 6y = 4$). (7-3, 7-5) Students are able to sketch a linear inequality (e.g., sketch the region $2x + 6y < 4$). (9-5)	4
7.0	Students verify that a point lies on a line, given an equation of the line. (7-2, 8-1) Students are able to derive linear equations using the point-slope formula. (7-4, 7-6, 7-7)	4
10.0	**Students perform these ops for monomials:** a) add (1-5, 2-7, 2-8, 5-5) b) subtract (2-7, 2-8, 5-5, 5-7) c) multiply (1-5, 2-7, 2-8, 5-3, 5-9) d) divide (5-3) **Students perform these ops for polynomials:** a) add (1-5, 2-7, 2-8, 5-5) b) subtract (2-7, 2-8, 5-5, 5-8) c) multiply (1-5, 2-7, 2-8, 5-3, 5-9, 5-10, 5-11) d) divide (5-3, 10-9) Students solve multi-step problems using ops of monomials. (5-6) Students solve multi-step problems using ops of polynomials. (5-6) Students solve word problems using ops of monomials. (3-11) Students solve word problems using ops of polynomials. (6-9)	4
13.0	**Students perform these ops for rational exps:** a) add (10-4, 10-5) b) subtract (10-4, 10-5) c) multiply (10-2) d) divide (10-3, 10-10) **Students perform these ops for rational funcs:** a) add (10-6) b) subtract (10-6) c) multiply (10-6) d) divide (10-6) Students solve computationally challenging problems by using ops of rational expressions. (10-10, 13-5) Students solve computationally challenging problems by using ops of rational functions. (10-6) Students solve conceptually challenging problems by using ops of rational expressions. (10-10, 13-5) Students solve conceptually challenging problems by using ops of rational functions. (10-6)	4
15.0	Students apply algebraic techniques to solve rate problems. (8-5, 10-7, 12-5 thru 12-7) Students apply algebraic techniques to solve work problems. (10-7) Students apply algebraic techniques to solve percent mixture problems. (10-8)	4

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4.0	Students simplify expressions prior to solving linear equations in one variable, such as 3(2*x*-5) + 4(*x*-2) = 12. (3-3, 3-5, 3-6) Students simplify expressions prior to solving linear inequalities in one variable, such as 3(2x-5) + 4(x-2) > 12. (4-4, 9-4)	3
12.0	Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms. (10-1)	3
14.0	Students solve a quadratic equation by factoring. (6-8, 6-9, 13-1, 13-5 thru 13-7) Students solve a quadratic equation by completing the square. (13-3, 13-5, 13-7)	3
20.0	Students use the quadratic formula to find the roots of a second-degree polynomial. (13-4, 13-5, 13-7) Students use the quadratic formula to solve quadratic equations. (13-4, 13-5, 13-7)	3
21.0	Students graph quadratic functions. (12-4) Students know that the roots of quadratic functions are the *x*-intercepts. (12-4)	3
23.0	Students apply quadratic equations to physical problems, such as the motion of an object under the force of gravity. (13-2, 13-7)	3
3.0	Students solve equations involving absolute values. (3-8, 9-3) Students solve inequalities involving absolute values. (9-4)	2
11.0	Students apply basic factoring techniques to second-degree polynomials. a) finding a common factor for all terms in a polynomial (6-1, 6-7) b) recognizing the difference of two squares (6-2, 6-7) c) recognizing perfect squares of binomials (6-3, 6-7) Students apply basic factoring techniques to simple third-degree polynomials. a) finding a common factor for all terms in a polynomial (6-1, 6-7) b) recognizing the difference of two squares (6-2, 6-7) c) recognizing perfect squares of binomials (6-3, 6-7)	2
19.0	Students know the quadratic formula. (13-4) Students are familiar with the proof of the quadratic formula by completing the square. (13-4)	2
8.0	Students understand the concept of parallel lines. (7-8) Students understand how the slopes of parallel lines are related. (7-8) Students understand the concept of perpendicular lines. (7-8) Students understand how the slopes of perpendicular lines are related. (7-8) Students are able to find the equation of a line perpendicular to a given line that passes through a given point. (7-8)	1
17.0	Students determine the domain of independent variables defined by a graph. (12-2) Students determine the domain of independent variables defined by a set of ordered pairs. (12-2) Students determine the domain of independent variables defined by a symbolic expression. (12-1) Students determine the range of dependent variables defined by a graph. (12-2) Students determine the range of dependent variables defined by a set of ordered pairs. (12-2) Students determine the range of dependent variables defined by a symbolic expression. (12-1)	1
22.0	Students use the quadratic formula to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points. (13-4) Students use factoring techniques to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points. (12-4) Students use both the quadratic formula and factoring techniques to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points. (13-4)	1

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1.1	Students use properties of numbers to demonstrate whether assertions are true. (1-2 p14 #30-35, 2-10) Students use properties of numbers to demonstrate whether assertions are false. (1-2 p14 #30-35, 2-10)	1/2
16.0	Students understand the concept of a relation. (12-1) Students understand the concept of a function. (12-1, 12-2) Students determine whether a given relation defines a function. (12-1, 12-2) Students give pertinent information about given relations. (12-3) Students give pertinent information about given functions. (12-3)	1/2
18.0	Students determine whether a relation defined by a graph is a function. (12-2) Students justify the conclusion of whether a relation defined by a graph is a function. (12-2) Students determine whether a set of ordered pairs is a function. (12-2) Students justify the conclusion of whether a set of ordered pairs is a function. (12-2) Students determine whether a symbolic expression is a function. (12-1) Students justify the conclusion of whether a symbolic expression is a function. (12-2)	1/2
25.1	Students use properties of numbers to construct valid direct arguments for claimed assertions. (10-11) Students use properties of numbers to construct valid direct arguments to formulate counterexamples to claimed assertions. Students use properties of numbers to construct valid indirect arguments for claimed assertions. Students use properties of numbers to construct valid indirect arguments to formulate counterexamples to claimed assertions.	1/2
25.2	Students judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step.	1/2
25.3	Given a specific algebraic statement involving linear equations, students determine whether the statement is true sometimes, always, or never. Given a specific algebraic statement involving linear expressions, students determine whether the statement is true sometimes, always, or never. (2-3 p69 #51-56) Given a specific algebraic statement involving linear inequalities, students determine whether the statement is true sometimes, always, or never. Given a specific algebraic statement involving quadratic equations, students determine whether the statement is true sometimes, always, or never. Given a specific algebraic statement involving quadratic expressions, students determine whether the statement is true sometimes, always, or never. Given a specific algebraic statement involving quadratic inequalities, students determine whether the statement is true sometimes, always, or never. Given a specific algebraic statement involving absolute value equations, students determine whether the statement is true sometimes, always, or never. Given a specific algebraic statement involving absolute value expressions, students determine whether the statement is true sometimes, always, or never. Given a specific algebraic statement involving absolute value inequalities, students determine whether the statement is true sometimes, always, or never.	1/2
24.1	Students explain the difference between inductive and deductive reasoning. Students identify inductive and deductive reasoning. Students provide examples of inductive and deductive reasoning.	1/3
24.2	Students identify the hypothesis in logical deduction. Students identify the conclusion in logical deduction.	1/3
24.3	Students use counterexamples to show that an assertion is false. Students recognize that a single counterexample is sufficient to refute an assertion.	1/3