

Essential Standards and Pacing Guide: Mathematics

6th Grade Mathematics

Strand	Standard	Pacing Guide	When Assessed	# of Questions on CST	Proficiencies by Subgroup	Notes	
Number Sense	6.N.1.1* Compare and order positive and negative fractions, decimals, and mixed numbers; place them on a number line.	Sept. and Nov.	2 times	3	Total: 53% White: 51.5% EL: 16.7% SED: 65%	District Assessment #1 given in August	
	6.N.1.2* Interpret and use ratios in different contexts (batting averages) to show the relative sizes of two quantities, using appropriate notations (a/b , a to b , $a:b$).	December	1 time	1			
	6.N.1.3* Use proportions to solve problems; use cross-multiplication to solve these problems.	Jan., Feb., Mar	4 times	6			
	6.N.1.4* Calculate given percentages of quantities; solve problems involving discounts, interest earned, and tips.	Jan., Feb.	2 times	5			
	6.N.2.3* Add, subtract, multiply, and divide positive and negative numbers; use combinations of operations to solve problems.	September	3 times	6			
	6.N.2.4* Determine <i>least common multiple</i> and <i>greatest common divisor</i> of whole numbers.	Oct., Nov.	3 times	3			
Algebra and Functions	6.A.1.1* Write and solve one-step linear equations in one variable.	Sept., Oct., Dec.	5 times	6	Total: 77% White: 37% EL: 05 SED: 49%	District Assessment #2 given in October	
	6.A.2.2* Understand that rate is a measure of one quantity per unit value of another quantity.	December	1 time	6			
Measurement and Geometry	6.G.2.2* Use the properties of complementary and supplementary angles, and the sum of the angles of a triangle, to solve problems involving an unknown angle.	Mar., Apr.	2 times	4	Total: 56% White: 54.3% EL: 66.7% SED: 54.4%		District Assessment #3 given in January
Statistics, Data Analysis, and Probability	6.S.2.2* Identify different ways of selecting a sample; state which method is more representative.	February	1 time	3	Total: 60% White: 57.1% EL: 33.3% SED: 67.5%		District Assessment #4 given after state testing
	6.S.2.5* Evaluate the validity of a statistical claim.	February	3 time	1 or 3			
	6.S.3.1* Represent all possible outcomes for compound events, in an organized way.	February	1 time	3			
	6.S.3.3* Represent probabilities as ratios, proportions, decimals, and percents.	February	1 time	3			
	6.S.3.5* Understand the difference between dependent and independent events.	Feb., Mar.	1 time	1 or 3			
Mathematical Reasoning		Embedded					

Pre-Algebra

Strand	Standard	Pacing Guide	When Assessed	# of Questions on CST	Proficiencies by Subgroup	Notes
Number Sense	7.N.1.2* Add, subtract, multiply, and divide rational numbers; take to whole-number powers.	Aug. to Jan.	6 times	4	Total: 82.3% White: 84% EL: 100% SED: 78.3%	District Assessment #1 given in August
	7.N.1.4* Differentiate between rational and irrational numbers.	Oct., Nov., Mar.	3 times	1		
	7.N.1.5* Know that every rational number is either a terminating or repeating decimal; convert to fractions.	Nov. & Mar	2 times	1		
	7.N.1.7* Solve problems that involve discounts, mark-ups, commissions, and interest.	Nov. to Jan.	2 times	5		
	7.N.2.2* Add and subtract fractions by factoring to find common denominators.	Nov.	1 time	1		
	7.N.2.3* Multiply, divide, and simplify rational numbers by using exponent rules.	Oct., Nov.	2 times	3		
	7.N.2.5* Understand absolute value; determine the absolute value of real numbers.	Aug. & Sept.	1 time	2		
Algebra and Functions	7.A.1.3* Simplify numerical expressions by applying properties of rational numbers.	Aug., Sept., Nov.	3 times	5	Total: 68.8% White: 78.5% EL: 0% SED: 45.3%	District Assessment #2 given in October District Assessment #3 given in January
	7.A.3.3* Graph linear functions, and know that the ratio is called the <i>slope</i> of the graph.	Jan.	1 time	2		
	7.A.3.4* Plot the values of quantities with the same ratios, and fit a line to the plot; understand that slope of a line equals the quantities.	Jan.	1 time	2		
	7.A.4.1* Solve two-step linear equations and inequalities in one variable over the rational numbers; interpret the solution and verify the reasonableness of the results.	Jan.	1 time	5		
	7.A.4.2* step problems involving rate, average speed, distance, and time, or a direct variation.	Nov. – Jan.	3 times	5		
Measurement and Geometry	7.G.1.3* Use measures expressed as rates and products to solve problems; check the reasonableness of answers.	Nov., Dec.	2 times	3	Total: 60.4% White: 71.4% EL: 0% SED: 71.05%	District Assessment #4 given in March
	7.G.3.3* Know and understand the Pythagorean Theorem	March	1 time	2		
	7.G.3.4* Understand conditions that indicate that two figures are congruent.	Jan. & Feb.	2 times	4		
	7.G.3.6* Identify elements of three-dimensional objects; describe how two or more are related.	Jan. & Feb.	2 times	1		
Statistics, Data Analysis, and Probability	7.S.1.3* Understand the meaning of, and be able to compute, the minimum, lower quartile, median, upper quartile, and maximum of a data set.	March	1 time	3	Total: 56.3% White: 57.1% EL: 50% SED: 79%	
Mathematical Reasoning		Embedded				

Algebra 1

Strand	Standard	Pacing Guide	When Assessed	# of Questions on CST	Proficiencies by Subgroup	Notes
Number Properties, Operations, and Linear Equations	Al.2.0* Use operations such as taking the opposite, finding the reciprocal, taking a root, and raising to a fractional power; understand and use the rules of exponents.	Aug., Sept., Dec., Jan., Feb., Mar	5 times	4	Total: 60% White: 60% EL: N/A SED: 44.6%	District Assessment #1 given in August
	Al.4.0* Simplify expressions prior to solving linear equations and inequalities in one variable [$3(2x - 5) + 4(x - 2) = 12$].	Aug., Sept., Oct.	3 times	3		
	Al.5.0* Solve multiple-step problems, including word problems, involving linear equations and linear inequalities in one variable; provide justification for each step.	Sept., Oct.	2 times	6		
Graphing and Systems of Linear Equations	Al.6.0* Graph a linear equation and compute the x- and y-intercepts (graph $2x + 6y = 4$), (2); sketch the region defined by linear inequality ($2x + 6y < 4$).	November	2 time	4	Total: 78% White: 75% EL: N/A SED: 78.5%	District Assessment #2 given in October
	Al.7.0* Verify that a point lies on a line, given an equation of the line, (1); derive linear equations using the point-slope formula.	November	1 time	4		
	Al.9.0* Algebraically solve a system of two linear equations in two variables, and interpret the answer graphically; solve a system of two linear inequalities in two variables; sketch the solution sets.	November	1 time	5		
Functions and Rational Expressions	Al.12.0* Simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.	March	1 time	3	Total: 48% White: 42% EL: N/A SED: 46.9%	District Assessment #3 given in January
	Al.13.0* Add, subtract, multiply, and divide rational expressions and functions.	March	1 time	4		
	Al.15.0* Apply algebraic techniques to solve rate, work, and percent mixture problems.	Sept., Oct., Nov., Mar.	1 time	4		
Quadratics and Polynomials	Al.10.0* Add, subtract, multiply, and divide monomials and polynomials; solve multiple-step problems, including word problems, by using these techniques.	Aug., Dec., Jan., Mar.	4 times	4	Total: 48% White: 46% EL: N/A SED: 46.9%	District Assessment #4 given in March
	Al.14.0* Solve a quadratic equation by factoring or completing the square.	Jan. & Feb	1 time	3		
	Al.19.0* Know the quadratic formula and be familiar with its proof by completing the square.	Jan. & Feb	1 time	2		
	Al.20.0* Use the quadratic formula to find the roots of a second-degree polynomial; solve quadratic equations.	Jan. & Feb	1 time	3		
	Al.21.0* Graph quadratic functions; know that their roots are the x-intercepts.	Jan. & Feb	1 time	3		
	Al.23.0* Apply quadratic equations to physical problems, such as the motion of an object under the force of gravity.	Jan. & Feb	1 time	3		