

# Schoolwide Benchmark Assessment Plan

## Math Standards

Test 1 September  
Test 2 November

Test 3 January  
Test 4 March

Test	Standard	ALGEBRA I Essential Math Standards		ALGEBRA I Kid Friendly Standards
1	4.0	Students simplify expressions before solving linear equations and inequalities in one variable, such as $3(2x-5) + 4(x-2) = 12$ .	4.0	Before I solve an equation, I know how to simplify expressions by using the distributive property and by combining like terms.
1	5.0	Students solve multi-step problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.	5.0	I can solve multi-step problems having equal signs (=) or inequalities (<, >) that have one variable. I can also explain how and why I did each of the steps to solve the problem.
1	6.0	Students graph a linear equation and compute the x-and y-intercepts (e.g., graph $2x + 6y = 4$ ).	6.0	I can graph a linear equation and determine the x and y intercepts.
1	7.0	Students verify that a point lies on a line, given an equation of the line. Students are able to derive linear equations.	7.0	When given a linear equation. I can graph the line and I can show that a point lies on the line. I can also create an equation for a line.
2	2.0	Students understand and use such operations as taking the opposite, finding the reciprocal, taking a root. They understand and use the rules of exponents.	2.0	I know that opposites have a sum of zero, like 9, -9 and $\frac{1}{2}$ and $-\frac{1}{2}$ . I know that reciprocals have a product of 1, like $\frac{3}{2}$ and $\frac{2}{3}$ and 5, $\frac{1}{5}$ . I can find the square root of a number. I can use the rules of exponents to find the value of an expression.
2	9.0	Students solve a system of two linear equations in two variables algebraically and are able to interpret the answer graphically. Students are able to solve a system of two linear inequalities in two variables and to sketch the solution sets.	9.0	I can solve a pair of equations or inequalities that have two variables, and show my answer as a picture on a graph.
2	15.0	Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.	15.0	I can use the techniques of algebra to solve ratio and proportion problems; problems that involve rate (like miles per hour), work or force (like pounds per square inch), and problems that mix different amounts of chemicals.
3	10.0	Students add, subtract, multiply, and divide monomials and polynomials. Students solve multi-step problems, including word problems, by using these techniques.	10.0	I can add, subtract, multiply, and divide monomials. I can solve word problems using these operations.
3	12.0	Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.	12.0	I can simplify a fraction.
3	13.0	Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.	13.0	I can add, subtract, multiply, and divide expressions that are written like fractions (rational).

<b>3</b>	<b>14.0</b>	Students solve a quadratic equation by factoring or completing the square.	<b>14.0</b>	I can solve a quadratic equation by factoring, and by a technique called "completing the square."
<b>4</b>	<b>19.0</b>	Students know the quadratic formula and are familiar with its proof by completing the square.	<b>19.0</b>	I know the quadratic formula and I can prove it by completing the square.
<b>4</b>	<b>20.0</b>	Students use the quadratic formula to find the roots of a second-degree polynomial and to solve quadratic equations.	<b>20.0</b>	I can use the quadratic formula to find the roots (answers) of a second-degree quadratic equation. I can solve quadratic equations.
<b>4</b>	<b>21.0</b>	Students graph quadratic functions and know that their roots are the x-intercepts.	<b>21.0</b>	I can graph quadratic functions, and I know that their roots are where the curve crosses the x axis.
<b>4</b>	<b>23.0</b>	Students apply quadratic equations to physical problems, such as the motion of an object under the force of gravity.	<b>23.0</b>	I can use quadratic equations to solve a problem like how long will it take for a ball that I throw in the air to hit the ground.