| ALGEBRA<br>Student Learning Targets | Mastery |
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| **Big Idea: Solve Equations and Inequalities** | |
| 1. I can solve linear equations. | |
| 2. I can solve single-variable linear inequalities algebraically and graphically. | |
| 3. I can solve equations for a specified variable. | |
| 4. I can solve proportions that include algebraic expressions. | |
| **Big Idea: Represent and Analyze Slope, Constant rate of change** | |
| 5. I can write algebraic expressions and equations to generalize visual or numeric patterns or data sets. | |
| 6. I can identify and explain slope as a constant rate of change in real world data and use to solve problems. | |
| 7. I can determine and explain the slope of any line, including vertical and horizontal lines, when given any of the following:<br>a. data points<br>b. a line on a graph<br>c. a table or real-world data<br>d. an equation | |
| **Big Idea: Linear relationships** | |
| 8. I can explain linear relationships using graphs, tables, equations. Make connections among the different representations. | |
| 9. I can identify & explain *x, y*-intercepts from an equation, graph, table of data, real world examples. | |
| 10. I can graph and explain the graphs of linear equations using the following strategies:<br>a. given *x*- and *y*-intercepts<br>b. given the slope & any point on the line<br>c. given an equation in any form | |
| 11. I can graph inequalities and explain the solutions shown on the graph of inequalities. | |
| 12. I can write the equation of a line in slope-intercept form when given:<br>a. a graph<br>b. two points<br>c. the slope and a point on the line | |
| 13. I can write equations given horizontal or vertical lines. I can identify horizontal or vertical lines given an equation or slope. | |
| 14. I can write the equation of a line in standard form. | |
| 15. I can determine how changes in the slope or *y*-intercept will affect an equation or graph. | |
| 16. I can differentiate between linear and nonlinear functions looking at a data, table, an equation, or a graph. | |
| **Big Idea: Statistics—Line of Best Fit** | |
| 17. I can collect, record, organize, and display a set of data with two variables. | |
| 18. I can determine if the relationship between two variables is linear or nonlinear in a scatter plot. | |
| 19. I can characterize the relationship between two variables as positive, negative, or zero correlation. | |
| 20. I can estimate the equation of the line of best fit given a set of data on a graph. I can use this line to make and test conjectures. | |
| 21. I can interpret the slope and *y*-intercept of a line through data | |
| 22. I can predict *y*-values for given *x*-values when appropriate using a line fitted to data. | |
| **Big Idea: Systems of Equations** | |
| 23. I can solve a system of two linear equations graphically and algebraically with and without the use of technology. Determine the number of solutions for a system of two linear equations. | |
| 24. I can graph a system of linear inequalities and determine solutions. | |

| **Big Idea: Rational and Irrational Numbers, Compute and make reasonable estimates** | |
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| 25. I can classify numbers as rational or irrational (including Pi and square roots of non-perfect square numbers). | |
| 26. I can place rational and irrational numbers on a number line between two integers. | |
| 27. I can simplify, add, subtract, multiply, and divide expressions with square roots. | |
| 28. I can evaluate and simplify expressions, including formulas, containing rational numbers and square roots using the order of operations. | |
| 29. I can compute solutions to problems, represent answers in exact form, and determine the reasonableness of answers. | |
| 30. I can calculate the measure of the sides of a right triangle using the Pythagorean Theorem. | |
| **Big Idea: Simplify and Factor Polynomials, Solve Quadratic Equations** | |
| 31. I can simplify and evaluate monomial expressions and formulas. | |
| 32. I can add and subtract polynomials. | |
| 33. I can multiply monomials with polynomials. Multiply two binomials. | |
| 34. I can simplify expressions containing positive and negative exponents, and express answer using positive exponents. | |
| 35. I can find the greatest common factor of two monomials and a polynomial. | |
| 36. I can factor a trinomial with a leading coefficient of 1 using the greatest common factor, finding the difference of two squares, and perfect square trinomials. | |
| 37. I can solve a quadratic equation using factoring and square roots. | |
| 38. I can write a quadratic equation given the solutions. | |