

<b>Standard I: Students will expand number sense to understand, perform operations, and solve problems with real numbers.</b>	
<b>Objective 1.1: Represent real numbers as points on the number line and distinguish rational numbers from irrational numbers.</b>	
<b>a.</b> Define a rational number as a point on the number line that can be expressed as the ratio of two integers, and points that cannot be so expressed as irrational.	<b>Chapter 2: Unit 1:</b> 2.01, 2.03, 2.04 <b>Chapter 12: Unit 1:</b> 12.01, 12.05
<b>b.</b> Classify numbers as rational or irrational, knowing that rational numbers can be expressed as terminating or repeating decimals and irrational numbers can be expressed as non-terminating, non-repeating decimals.	<b>Chapter 2: Unit 1:</b> 2.03
<b>c.</b> Classify $\pi$ and square roots of non-perfect square numbers as irrational.	<b>Chapter 2: Unit 1:</b> 2.01, 2.03, 2.04 <b>Chapter 12: Unit 1:</b> 12.01, 12.02, 12.03, 12.05
<b>d.</b> Place rational and irrational numbers on a number line between two integers.	<b>Chapter 2: Unit 1:</b> 2.04
<b>Objective 1.2: Compute fluently and make reasonable estimates with rational and irrational numbers.</b>	
<b>a.</b> Simplify, add, subtract, multiply, and divide expressions with square roots.	<b>Chapter 12: Unit 1:</b> 12.01, 12.02, 12.03, 12.04, 12.07, 12.08 <b>Chapter 12: Unit 2:</b> 12.09, 12.10, 12.11, 12.12, 12.13, 12.14, 12.15, 12.16 <b>Chapter 12: Unit 3:</b> 12.17, 12.18, 12.19, 12.20, 12.21, 12.22, 12.23, 12.24 <b>Chapter 12: Unit 4:</b> 12.25, 12.26, 12.27, 12.28, 12.29, 12.30, 12.31, 12.32 <b>Chapter 12: Unit 6:</b> 12.37, 12.38, 12.39, 12.40, 12.41, 12.42, 12.43, 12.44

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<p><b>b.</b></p>	<p>Evaluate and simplify numerical expressions containing rational numbers and square roots using the order of operations.</p>	<p><b>Chapter 12: Unit 1:</b> 12.01, 12.02, 12.03, 12.04, 12.07, 12.08</p> <p><b>Chapter 12: Unit 2:</b> 12.09, 12.10, 12.11, 12.12, 12.14, 12.15, 12.16</p> <p><b>Chapter 12: Unit 3:</b> 12.17, 12.18, 12.19, 12.20, 12.21, 12.22, 12.23, 12.24</p> <p><b>Chapter 12: Unit 4:</b> 12.25, 12.26, 12.28, 12.29, 12.30, 12.31, 12.32</p> <p><b>Chapter 12: Unit 5:</b> 12.33, 12.34, 12.35, 12.36</p> <p><b>Chapter 12: Unit 10:</b> 12.65, 12.66</p> <p><b>Chapter 13: Unit 1:</b> 13.10</p> <p><b>Chapter 13: Unit 4:</b> 13.31, 13.32</p>
<p><b>c.</b></p>	<p>Compute solutions to problems, represent answers in exact form, and determine the reasonableness of answers.</p>	<p>NOTE: Throughout the program students compute solutions to problems, represent answers in exact form, and check to determine reasonableness of solutions. See sample lessons below:</p> <p><b>Chapter 3: Unit 1:</b> 3.01</p> <p><b>Chapter 3: Unit 6:</b> 3.34, 3.35</p> <p><b>Chapter 8: Unit 1:</b> 8.07</p> <p><b>Chapter 11: Unit 7:</b> 11.40</p> <p><b>Chapter 12: Unit 8:</b> 12.47</p> <p><b>Chapter 13: Unit 1:</b> 13.06</p>
<p><b>d.</b></p>	<p>Calculate the measures of the sides of a right triangle using the Pythagorean Theorem.</p>	<p><b>Chapter 12: Unit 6:</b> 12.38, 12.39, 12.40, 12.41, 12.42, 12.43, 12.44</p> <p><b>Chapter 12: Unit 11:</b> 12.69, 12.70</p> <p><b>Chapter 12: Unit 12:</b> 12.71</p> <p><b>Chapter 13: Unit 1:</b> 13.08</p>

<b>Standard II: Students will extend concepts of proportion to represent and analyze linear relations.</b>	
<b>Objective 2.1: Represent and analyze the slope of a line.</b>	
<b>a.</b> Identify the slope of a line when given points, a graph, or an equation.	<b>Chapter 5: Unit 4:</b> 5.23, 5.24, 5.25, 5.26 <b>Chapter 5: Unit 5:</b> 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.37, 5.39, 5.40
<b>b.</b> Identify horizontal and vertical lines given the equations or slopes.	<b>Chapter 5: Unit 5:</b> 5.31, 5.37, 5.39
<b>c.</b> Determine the effect of changes in slope or y-intercept in $y = mx + b$ .	<b>Chapter 5: Unit 5:</b> 5.27, 5.28, 5.29
<b>d.</b> Determine and explain the meaning of slopes and intercepts using real-world examples.	<b>Chapter 5: Unit 4:</b> 5.26 Chapter 5: Unit 5: 5.32, 5.35, 5.36, 5.38, 5.40
<b>Objective 2.2 Model and interpret problems having a constant rate of change using linear functions.</b>	
<b>a.</b> Write algebraic expressions or equations to generalize visual patterns, numerical patterns, relations, data sets, or scatter plots.	<b>Chapter 5: Unit 5:</b> 5.31, 5.32, 5.33, 5.34, 5.35, 5.36, 5.37, 5.39, 5.40 <b>Chapter 5: Unit 6:</b> 5.42, 5.43, 5.44, 5.45, 5.46, 5.47, 5.48 <b>Chapter 5: Unit 8:</b> 5.50, 5.51, 5.52, 5.53, 5.54, 5.55, 5.56, 5.57 <b>Chapter 5: Unit 9:</b> 5.58, 5.59, 5.60, 5.61, 5.64
<b>b.</b> Represent linear equations in slope-intercept form, $y = mx + b$ , and standard form, $Ax + By = C$ .	<b>Chapter 5: Unit 5:</b> 5.27, 5.28, 5.29, 5.30, 5.31, 5.32, 5.33, 5.34, 5.36, 5.37, 5.39, 5.40 <b>Chapter 5: Unit 6:</b> 5.41 <b>Chapter 6: Unit 1:</b> 6.08
<b>c.</b> Distinguish between linear and non-linear functions by examining a table, equation, or graph.	<b>Chapter 6: Unit 1:</b> 6.00, 6.01, 6.02, 6.03, 6.04, 6.05, 6.06, 6.07, 6.08, 6.09, 6.11, 6.13, 6.14
<b>d.</b> Interpret the slope of a linear function as a rate of change in real-world situations.	<b>Chapter 5: Unit 8:</b> 5.50, 5.51, 5.52, 5.53, 5.54, 5.55, 5.56, 5.57

<b>Objective 2.3: Represent and analyze linear relationships using algebraic equations, expressions, and graphs.</b>		
<b>a.</b>	Write the equation of a line when given two points or the slope and a point on the line.	<b>Chapter 5: Unit 5:</b> 5.33, 5.34, 5.35, 5.36, 5.39, 5.40
<b>b.</b>	Approximate the equation of a line given the graph of a line.	<b>Chapter 5: Unit 5:</b> 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 <b>Chapter 5: Unit 6:</b> 5.41, 5.42, 5.43, 5.44, 5.45, 5.46, 5.47, 5.48 <b>Chapter 5: Unit 9:</b> 5.62, 5.63, 5.64
<b>c.</b>	Identify the $x$ - and $y$ -intercepts from an equation or graph of a line or a table of values.	<b>Chapter 5: Unit 5:</b> .29, 5.29, 5.30 <b>Chapter 5: Unit 6:</b> 5.41 <b>Chapter 5: Unit 10:</b> 10.79 <b>Chapter 5: Unit 13:</b> 13.48
<b>d.</b>	Graph linear relations and inequalities by plotting points, by finding $x$ - and $y$ intercepts, or by using the slope and any point of the line.	<b>Chapter 5: Unit 5:</b> 5.33, 5.34, 5.35 <b>Chapter 5: Unit 8:</b> 8.27, 8.28, 8.29, 8.30, 8.31, 8.32, 8.33, 8.34, 8.35
<b>Standard III: Students will develop fluency with the language and operations of algebra to analyze and represent relationships.</b>		
<b>Objective 3.1: Simplify polynomials and the quotient of monomials.</b>		
<b>a.</b>	Simplify and evaluate monomial expressions and formulas.	<b>Chapter 1: Unit 2:</b> 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.20, 1.21, 1.22 <b>Chapter 1: Unit 5:</b> 1.30, 1.31, 1.32, 1.33, 1.34, 1.35, 1.36, 1.37 <b>Chapter 2: Unit 4:</b> 2.31, 2.32, 2.33, 2.34, 2.35, 2.36, 2.37 <b>Chapter 9: Unit 1:</b> 9.01, 9.02, 9.03, 9.04, 9.05, 9.06, 9.07, 9.08, 9.09, 9.10, 9.11 <b>Chapter 9: Unit 2:</b> 9.12, 9.13, 9.14, 9.15, 9.16, 9.17, 9.18, 9.19, 9.20, 9.21, 9.22, 9.23

		<b>Chapter 9: Unit 3:</b> 9.24, 9.25, 9.26, 9.27, 9.28, 9.29, 9.30, 9.31, 9.32
<b>b.</b>	Add and subtract polynomials.	<b>Chapter 10: Unit 2:</b> 10.14, 10.15, 10.16, 10.17, 10.18, 10.19
<b>c.</b>	Multiply monomials by a polynomial.	<b>Chapter 10: Unit 3:</b> 10.20, 10.21, 10.22, 10.23, 10.24, 10.25, 10.26, 10.27, 10.28, 10.29
<b>d.</b>	Multiply binomials.	<b>Chapter 10: Unit 3:</b> 10.21, 10.22, 10.23, 10.24, 10.25, 10.26, 10.27, 10.28, 10.29 <b>Chapter 10: Unit 4:</b> 10.29, 10.30, 10.31, 10.32, 10.33, 10.34
<b>e.</b>	Simplify the quotient of monomials using positive exponents.	<b>Chapter 10: Unit 5:</b> 10.35, 10.36, 10.37, 10.38, 10.39, 10.40, 10.41, 10.42
<b>Objective 3.2: Solve and interpret linear equations and inequalities in various situations including real-world problems.</b>		
<b>a.</b>	Solve single-variable linear equations and inequalities algebraically and graphically.	<b>Chapter 3: Unit 8:</b> 3.45, 3.46, 3.47, 3.48, 3.49, 3.50 <b>Chapter 3: Unit 10:</b> 3.56, 3.57, 3.58, 3.59 <b>Chapter 5: Unit 5:</b> 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 <b>Chapter 8: Unit 1:</b> 8.01, 8.01, 8.02, 8.03, 8.04, 8.05, 8.06, 8.07, 8.08, 8.09, 8.10, 8.11, 8.12
<b>b.</b>	Solve real-world problems involving constant rates of change.	<b>Chapter 5: Unit 8:</b> 5.50, 5.51, 5.52, 5.53, 5.54, 5.55, 5.56, 5.57
<b>c.</b>	Solve equations for a specified variable.	<b>Chapter 5: Unit 8:</b> 5.56, 5.57, 5.58, 5.59

	<p><b>d.</b> Solve proportions that include algebraic first-degree expressions.</p>	<p><b>Chapter 4: Unit 1:</b> 4.07  <b>Chapter 5: Unit 8:</b> 5.50, 5.51, 5.52, 5.53, 5.54, 5.55, 5.56, 5.57  <b>Chapter 13: Unit 4:</b> 13.35</p>
<p><b>Objective 3.3: Solve and interpret pairs of linear equations and inequalities.</b></p>		
	<p><b>a.</b> Solve systems of two linear equations graphically and algebraically with and without technology.</p>	<p><b>Chapter 7: Unit 1:</b> 7.00, 7.01, 7.02, 7.03, 7.04  <b>Chapter 7: Unit 2:</b> 7.05, 7.08, 7.09  <b>Chapter 7: Unit 3:</b> 7.10  <b>Chapter 7: Unit 4:</b> 7.11, 7.12, 7.13, 7.14, 7.15, 7.16, 7.17, 7.18, 7.20, 7.21  <b>Chapter 7: Unit 5:</b> 7.22, 7.23, 7.24, 7.25, 7.26, 7.27, 7.28, 7.29, 7.30, 7.31  <b>Chapter 7: Unit 6:</b> 7.32, 7.33, 7.34, 7.35, 7.36  <b>Chapter 7: Unit 7:</b> 7.37, 7.38, 7.39, 7.40, 7.41, 7.42, 7.43, 7.44, 7.45, 7.46</p>
	<p><b>b.</b> Determine the number of possible solutions for a system of two linear equations.</p>	<p><b>Chapter 7: Unit 2:</b> 7.05, 7.06, 7.07, 7.08, 7.09</p>
	<p><b>c.</b> Graph a system of linear inequalities and identify the solution.</p>	<p><b>Chapter 8: Unit 4:</b> 8.27, 8.28, 8.29, 8.30, 8.31, 8.32, 8.33, 8.34, 8.35</p>
<p><b>Objective 3.4: Factor polynomials with common monomial factors and factor simple quadratic expressions.</b></p>		
	<p><b>a.</b> Find the greatest common monomial factor of a polynomial.</p>	<p><b>Chapter 10: Unit 7:</b> 10.51, 10.60  <b>Chapter 10: Unit 8:</b> 10.64  <b>Chapter 11: Unit 4:</b> 11.26</p>
	<p><b>b.</b> Factor trinomials with integer coefficients of the form <math>x^2 + bx + c</math>.</p>	<p><b>Chapter 10: Unit 7:</b> 10.51, 10.52, 10.53, 10.54, 10.55, 10.56, 10.57, 10.58, 10.59, 10.60, 10.61, 10.62, 10.63</p>

		<b>Chapter 10: Unit 8:</b> 10.64, 10.65, 10.66, 10.67, 10.68, 10.69, 10.70 <b>Chapter 11: Unit 1:</b> 11.04 <b>Chapter 13: Unit 1:</b> 13.04
c.	Factor the difference of two squares and perfect square trinomials.	<b>Chapter 10: Unit 9:</b> 10.71, 10.72
<b>Objective 3.5: Solve quadratic equations using factoring or by taking square roots.</b>		
a.	Solve quadratic equations that can be simplified to the form $x^2 = a$ where $a \geq 0$ by taking square roots.	<b>Chapter 13: Unit 2:</b> 13.13, 13.14, 13.15, 13.16, 13.17, 13.18, 13.19, 13.20
b.	Solve quadratic equations using factoring.	<b>Chapter 13: Unit 1:</b> 13.00, 13.01, 13.02, 13.03, 13.04, 13.05, 13.06, 13.07, 13.08, 13.09, 13.10, 13.11, 13.12 <b>Chapter 13: Unit 3:</b> 13.21, 13.22, 13.23, 13.24, 13.25, 13.26 <b>Chapter 13: Unit 4:</b> 13.27, 13.28, 13.29, 13.30, 13.31, 13.32, 13.33, 13.34, 13.35, 13.36, 13.37
c.	Write a quadratic equation when given the solutions.	<b>Chapter 13: Unit 1:</b> 13.01, 13.02, 13.07 <b>Chapter 13: Unit 6:</b> 13.45, 13.46, 13.47, 13.48, 13.49, 13.50, 13.51, 13.52, 13.53, 13.54

<b>Standard IV: Students will understand concepts from statistics and apply statistical methods to solve problems.</b>		
<b>Objective 4.1: Objective 1: Summarize, display, and analyze bivariate data.</b>		
<b>a.</b>	Collect, record, organize, and display a set of data with at least two variables.	<b>Chapter 4: Unit 1:</b> 4.00, 4.01, 4.02, 4.03, 4.04, 4.05, 4.06, 4.07, 4.08, 4.09, 4.10, 4.11  <b>Chapter 4: Unit 2:</b> 4.12, 4.13, 4.14, 4.15 <b>Chapter 4: Unit 3:</b> 4.16, 4.17, 4.18, 4.19, 4.20, 4.21 <b>Chapter 4: Unit 4:</b> 4.22, 4.23 <b>Chapter 4: Unit 5:</b> 4.24  <b>Chapter 5: Unit 9:</b> 5.58, 5.59, 5.60, 5.61
<b>b.</b>	Determine whether the relationship between two variables is approximately linear or non-linear by examination of a scatter plot.	<b>Chapter 5: Unit 9:</b> 5.58, 5.59, 5.60, 5.61, 5.62, 5.64
<b>c.</b>	Characterize the relationship between two linear related variables as having positive, negative, or approximately zero correlation.	<b>Chapter 5: Unit 9:</b> 5.62, 5.64
<b>Objective 4.2: Estimate, interpret, and use lines fit to bivariate data.</b>		
<b>a.</b>	Estimate the equation of a line of best fit to make and test conjectures.	<b>Chapter 5: Unit 5:</b> 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 <b>Chapter 5: Unit 9:</b> 5.62, 5.63, 5.64
<b>b.</b>	Interpret the slope and y-intercept of a line through data.	<b>Chapter 5: Unit 4:</b> 5.23, 5.24, 5.25, 5.26  <b>Chapter 5: Unit 5:</b> 5.27, 5.28, 5.29, 5.30, 5.31, 5.33, 5.34, 5.35, 5.36, 5.39, 5.40 <b>Chapter 5: Unit 9:</b> 5.62, 5.63, 5.64
<b>c.</b>	Predict y-values for given x-values when appropriate using a line fitted to bivariate numerical data.	<b>Chapter 5: Unit 9:</b> 5.62, 5.63, 5.64