

## 8th Grade Mathematics Pre-Algebra Curriculum Map 2023

Pacing Guide	Standard Code & Indicator	Sample Learning Activities	Sample Assessments	Additional Standards
<p><b>August - Beginning of September</b></p> <p><b>Unit Title:</b> Review of Algebraic fundamentals</p>	<p><b>7.NS.1</b> Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p> <p><b>7.NS.1 a.</b> Describe situations in which opposite quantities combine to make 0.</p> <p><b>7.NS.1 b.</b> Understand <math>p + q</math> as the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction depending on whether <math>q</math> is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p> <p><b>7.NS.1 c.</b> Understand subtraction of rational numbers as adding the additive inverse, <math>p - q = p + (-q)</math>. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.</p> <p><b>7.NS.1 d</b> Apply properties of operations as strategies to add and subtract rational numbers.</p>	<p>- Write variable expressions for word phrases</p> <p>-Use order of operations with variables</p> <p>-Add, subtract, divide, multiply of integers</p> <p>-Evaluate expressions</p> <p>-Understand the basic functions of your scientific calculator and graphing calculator</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook Teacher Created Resources</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p><b>Student Technology:</b> Scientific Calculator</p>	<p><b>Formative Assessments:</b> Checkpoint Quiz Teacher Observation Homework/Classroom Student Participation Problem of the Day Self Assessment Quiz (1)</p> <p><b>Summative Assessments:</b> Chapter Test- Foundations of Pre-Algebra</p> <p><b>Benchmark Assessments:</b> BOY Benchmark LinkIt Benchmark</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard:</b> <b>2.2.8.MSC.5:</b> Students form teams to solve one problem. Each team has a different problem. They have to effectively communicate with one another to resolve the problem. It is stressed that groups listen to one another to come to a conclusion.</p> <p><b>Technology Standard:</b> 9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>

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	<p><b>8.NS.A.1</b> Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number</p> <p><b>7.NS.A.2a</b> Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as <math>(-1)(-1) = 1</math> and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts</p> <p><b>7.NS.A.2b</b> Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If <math>p</math> and <math>q</math> are integers, then <math>-(p/q) = (-p)/q = p/(-q)</math>. Interpret quotients of rational numbers by describing real-world contexts</p> <p><b>7.NS.A.2c</b> Apply properties of operations as strategies to multiply and divide rational numbers.</p> <p><b>7.NS.A.2d</b> Convert a rational number to a decimal using long division; know that</p>	<p>Chromebook          Google Classroom  <a href="#">Math IXL</a>  <a href="#">Prodigy</a>  <a href="#">Khan Academy</a>  <a href="#">Quizzes.com</a>  <a href="#">Quizlet Live</a></p> <p><b>Teacher Technology:</b>          ActivView          ActivPanel          Flipchart lessons          Interactive Activities on the ActivPanel</p>		
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	<p>the decimal form of a rational number terminates in 0s or eventually repeats</p> <p><b>7.NS.A.3</b> Solve real-world and mathematical problems involving the four operations with rational numbers.</p> <p><b>6.NS.C.5</b> Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</p> <p><b>6.NS.C.6a</b> Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., <math>-(-3) = 3</math>, and that 0 is its own opposite.</p> <p><b>6.NS.C.7a</b> Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.</p> <p><b>6.NS.C.7b</b> Write, interpret, and explain statements of order for rational numbers in real-world contexts</p>			
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	<p><b>6.NS.C.7c</b> Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. <i>For example, for an account balance of <math>-30</math> dollars, write <math> -30  = 30</math> to describe the size of the debt in dollars.</i></p> <p><b>6.NS.C.7d</b> Distinguish comparisons of absolute value from statements about order. <i>For example, recognize that an account balance less than <math>-30</math> dollars represents a debt greater than 30 dollars.</i></p>			
<p><b>End of September – Mid October</b></p> <p><b>Unit Title:</b> Evaluating Expressions, and Writing and Solving Equations</p>	<p><b>8.EE.C.7</b> Analyze and solve linear equations and pairs of simultaneous linear equations. Solve linear equations in one variable:</p> <p><b>8.EE.C.7a.</b> Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form <math>x = a</math>, <math>a = a</math>, or <math>a = b</math> results (where <math>a</math> and <math>b</math> are different numbers).</p> <p><b>8.EE.C.7b.</b> Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the</p>	<p>-Review key properties of identify, commutative, associative and distributive</p> <p>-Simplify variable expressions</p> <p>-Solve one step equations by addition or subtraction</p> <p>-Solve one step equations by multiplying or dividing</p> <p>-Solve inequalities by adding, subtracting, multiplying or dividing</p> <p>-Solve two and multi step equations and inequalities</p> <p>-Write and solve compound inequalities</p>	<p><b>Formative Assessments:</b> Checkpoint Quiz Teacher Observation Homework Classroom practice Student Participation Problem of the Day Self Assessment Quizzes</p> <p><b>Summative Assessments:</b> Chapter Test- Equation Unit</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard:</b> <b>LITERACY.SL.8.1</b> Problem of the Day Activity - students will be given four problems with various degrees of difficulty. They will move to a station with their group to complete the task. Students will need to effectively discuss how to solve the problems using each other's ideas to help build toward the correct solution.</p> <p><b>Technology Standard:</b> 9.4.8.TL.6: Collaborate to develop and publish work that</p>

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	<p>distributive property and collecting like terms.</p> <p><b>A-REI.B.3</b> Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.</p>	<p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b> Graphing Calculator Chromebook Google Classroom <a href="http://MathIXL.com">Math IXL</a> <a href="http://Prodigy.com">Prodigy</a> <a href="http://KahnAcademy.com">Kahn Academy</a></p> <p><b>Teacher Technology:</b> ActivView ActivPanel</p>		<p>provides perspectives on a real-world problem.</p>
<p style="text-align: center;"><b>October</b></p> <p><b>Unit Title:</b> Evaluating Expressions, and Writing and Solving Equations – Part II : Equations using decimals and fractions</p>	<p><b>8.NS.1</b> Know that there are numbers that are not rational, and approximate them by rational numbers.</p> <p><b>8.NS.2</b> Understand informally that every number has a decimal expansion; for rational numbers show that the decimal</p>	<ul style="list-style-type: none"> <li>- Round and estimate decimals</li> <li>-Write formulas using a spreadsheet</li> <li>-Solve equations with decimals</li> </ul>	<p><b>Formative Assessments:</b> Checkpoint Quiz Teacher Observation Homework/Classroom Student Participation Journal Entry Problem of the Day</p>	<p><b>Interdisciplinary Standard: W.8.1</b> Students explain the difference between rational numbers and irrational numbers through the use of examples and in depth written explanations.</p>

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	<p>expansion repeats eventually, and convert a decimal</p> <p><b>8.EE.7</b> Solve linear equations in one variable.</p> <p><b>8.EE.7.a</b> Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form <math>x = a</math>, <math>a = a</math>, or <math>a = b</math> results (where <math>a</math> and <math>b</math> are different numbers).</p> <p><b>8.EE.7.b</b> Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.</p> <p>HSA-REI.3 Solve equations and inequalities in one variable</p> <p>HSA-REI.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.</p>	<p>-Recognize that repeating decimals correspond to fractions and determine their fractional equivalents</p> <p>-Construct meanings for common irrational numbers, such pi and the square root of 2</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b> Graphing Calculator Chromebook Google Classroom <a href="http://MathIXL.com">Math IXL</a> <a href="http://KahnAcademy.com">Kahn Academy</a></p> <p><b>Teacher Technology:</b> ActivView ActivPanel</p>	<p><b>Summative Assessments:</b> Chapter Test Graphing Calculator Assignment (Mean and Median) Spreadsheet Assignment Irrational vs. Rational paper</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Technology Standard:</b> 9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>
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<p><b>November</b></p> <p><b>Unit Title:</b> Powers, Roots, and Scientific Notation (Factors, Fractions, and Exponents)</p>	<p><b>8.EE.1</b> Know and apply the properties of integer exponents to generate equivalent numerical expressions.</p> <p><b>8.EE.3.</b> Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.</p> <p><b>8.EE.4.</b> Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.</p> <p><b>8.NS.1</b> Know that numbers that are not rational are called irrational.</p> <p><b>8.NS.A1</b> Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal</p> <p><b>8.NS.A2</b> Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line</p>	<p>-Use exponentiation to find whole number powers of numbers.</p> <p>-Use and explain procedures for performing calculations involving addition, subtraction, multiplication, division and exponentiation with integers and all number types</p> <p>-Use negative exponents</p> <p>-Multiply and divide in scientific notation</p> <p>-Understand and use rational and irrational numbers</p> <p>-Solve least common multiple word problems</p> <p>-Find common factors and prime factorization of two or more numbers</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p>	<p><b>Formative Assessments:</b> Checkpoint Quiz Teacher Observation Homework/Classroom Student Participation Journal Entry Problem of the Day</p> <p><b>Summative Assessments:</b> Chapter Test Graphing Calculator Assignment (Evaluating Expression &amp; Scientific Notion)</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard</b> <b>LITERACY.SL.8.1.D</b> Students will present how to solve the scientific notation word problems. Students in the audience will analyze the completed process and make changes to the problem or concur. Students will be selected through a volunteer basis.</p> <p><b>Technology Standard:</b> 9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>
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	<p>diagram, and estimate the value of expressions (e.g., <math>\pi^2</math>).</p> <p><b>7.NS</b> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</p> <p><b>7.NS.3.</b> Solve real-world and mathematical problems involving the four operations with rational numbers</p>	<p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b>            Graphing Calculator            Chromebook            Google Classroom  <a href="http://MathIXL.com">Math IXL</a>  <a href="http://Prodigy.com">Prodigy</a>  <a href="http://KahnAcademy.com">Kahn Academy</a></p> <p><b>Teacher Technology:</b>            ActivView            ActivPanel</p>		
<p><b>December-January</b></p> <p><b>Unit Title:</b> Geometry</p>	<p><b>8.G.5.</b> Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.</p> <p><b>8.G.B.6</b> Explain a proof of the Pythagorean Theorem and its converse.</p> <p><b>8.G.B.7</b> Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.</p>	<p>-Define and identify vertical, complementary, supplementary and corresponding angles</p> <p>-Identify missing measures on a plane that had at least two parallel lines and one transversal</p> <p>-Identify corresponding parts of congruent triangles</p> <p>-Determine whether triangles are congruent</p>	<p><b>Formative Assessments:</b>            Checkpoint Quiz            Teacher Observation            Homework/Classroom            Student Participation            Journal Entry            Problem of the Day            Graphic Calculator            Activities</p> <p><b>Summative Assessments:</b>            Chapter Test-            Geometry Test            Angle Puzzle</p>	<p><b>Interdisciplinary Standard: W.8.1</b>            Error Analysis activity- students will correct “errors” made on an assessment and write an explanation to state why their corrections are accurate.</p> <p><b>Technology Standard:</b>            9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>



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	<p><b>8.G.B.8</b> Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.</p> <p><b>8.G.C.9</b> Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.</p> <p><b>8.G.C.9</b> Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.</p> <p><b>7.G.B.5</b> Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</p>	<ul style="list-style-type: none"> <li>-Understand the steps and find square roots of numbers</li> <li>-Classify real numbers</li> <li>-Find cube roots</li> <li>-Use the Pythagorean Theorem</li> <li>-Use the distance and midpoint formulas</li> <li>-Review surface area of prisms, cylinders, cones, spheres</li> <li>-Find the volume of cones, cylinders, and spheres</li> <li>-Use the volume of cones, cylinders and spheres to solve real-world problems</li> </ul> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p>	<p><a href="#">Accommodations and Modifications</a></p>	
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		<p>Teacher created resources</p> <p><b>Student Technology:</b>            Graphing Calculator            Chromebook            Google Classroom  <a href="#">Math IXL</a>  <a href="#">Prodigy</a>  <a href="#">Khan Academy</a></p> <p><b>Teacher Technology:</b>            ActivView            ActivPanel</p>		
<p><b>January-February</b></p> <p><b>Unit Title:</b>            Transformations</p>	<p><b>8.G.A.1</b> Verify experimentally the properties of rotations, reflections, and translations:</p> <p><b>8.G.A.1a</b> Lines are transformed to lines and line segments to line segments of the same length.</p> <p><b>8.G.A.1b</b> Angles are transformed to angles of the same measure.</p> <p><b>8.G.A.1c</b> Parallel lines are transformed to parallel lines.</p> <p><b>8.G.A.2</b> Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.</p>	<p>-Graph and describe translations</p> <p>-Identify a line of symmetry</p> <p>-Graph a reflection of a geometric figure</p> <p>-Graph rotations</p> <p>-Define and identify rotational symmetry</p> <p>-Describe the effect of dilation on two-dimensional figures using coordinates</p> <p><b>Instructional Resources:</b>            Big Ideas Pre-Algebra Textbook  <a href="#">Kutasoftware.com</a></p>	<p><b>Formative Assessments:</b>            Checkpoint Quiz            Teacher Observation            Homework/Classroom            Student Participation            Journal Entry            Graphing Calculator Activities</p> <p><b>Summative Assessments:</b>            Chapter Test - Transformations            Picture Project- Transformations            STAR Test - Winter growth</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard:</b>  <b>W.8.1</b> Students will need to explain how the multiple transformations were made in a given activity. Students will explain how to make the transformations then prove by using manipulatives to see if it is correct.</p> <p><b>Technology Standards:</b>            9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>

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	<p><b>8.G.A.3</b> Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.</p> <p><b>8.G.A.4</b> Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two dimensional figures, describe a sequence that exhibits the similarity between them.</p> <p><b>8.G.A.5</b> Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.</p>	<p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b>            Graphing Calculator            Chromebook            Google Classroom  <a href="http://Math IXL">Math IXL</a>  <a href="http://Prodigy">Prodigy</a>  <a href="http://Kahn Academy">Kahn Academy</a></p> <p><b>Teacher Technology:</b>            ActivView            ActivPanel</p>		
<p style="text-align: center;"><b>February</b></p> <p><b>Unit Title:</b> Functions</p>	<p><b>8.F</b> Define, evaluate, and compare functions.</p> <p><b>8.F.A.1</b> Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.1</p> <p><b>8.F.A.2</b> Compare properties(e.g., rate of change, intercepts, domain and range) of two functions each represented in a different way (algebraically, graphically,</p>	<p>-Determine whether a relation is a function</p> <p>-Graph relations and functions</p> <p>-Use tables, graphs, or listed numerically to determine the slope of the function.</p> <p>-Write a function rule for a word relationship</p>	<p><b>Formative Assessments:</b>            Checkpoint Quizzes            Teacher Observation            Homework/Classroom            Student Participation            Journal Entry            Graphing Calculator            Activities</p> <p><b>Summative Assessments:</b>            Chapter Test-Functions</p>	<p><b>Interdisciplinary Standard:</b>  <b>W.8.1</b> Students explain the difference between a linear and non linear function with examples in a classroom 15 minute google classroom activity.</p> <p><b>Technology Standard:</b>            9.4.8.TL.6: Collaborate to develop and publish</p>

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	<p>numerically in tables, or by verbal descriptions).</p> <p><b>8.F.A.3</b> Interpret the equation <math>y = mx + b</math> as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.</p> <p><b>8.F.B.4</b> Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two <math>(x, y)</math> values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.</p> <p><b>8.F.B.5</b> Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.</p>	<p>-Write a function rule by analyzing a table or graph</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b> Graphing Calculator Chromebook Google Classroom <a href="http://Math IXL">Math IXL</a> <a href="http://Prodigy">Prodigy</a> <a href="http://Kahn Academy">Kahn Academy</a></p> <p><b>Teacher Technology:</b> ActivView ActivPanel</p>	<p><a href="#">Accommodations and Modifications</a></p>	<p>work that provides perspectives on a real-world problem.</p>
<p><b>March-April</b></p> <p><b>Unit Title:</b> Bivariate Data</p>	<p><b>8.EE.B.5</b> Understand the connections between proportional relationships, lines, and linear equations.</p>	<p>-Use tables, graphs, or listed numerically to determine the slope of the function.</p>	<p><b>Formative Assessments:</b> Checkpoint Quiz Teacher Observation Homework/Classroom</p>	<p><b>Interdisciplinary Standard: W.8.1</b> Writing Standard Students will be given various forms of linear</p>

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	<p>Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.</p> <p><b>8.EE.B.6</b> Use similar triangles to explain why the slope <math>m</math> is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation <math>y = mx</math> for a line through the origin and the equation <math>y = mx + b</math> for a line intercepting the vertical axis at <math>b</math>.</p> <p><b>8.F.A.3</b> Interpret the equation <math>y = mx + b</math> as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.</p> <p><b>8.F.B.4</b> Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two <math>(x, y)</math> values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.</p> <p><b>8.F.B.5</b> Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features</p>	<p>-Find solutions of equations with two variables</p> <p>-Graph linear equations with two variables</p> <p>-Find the slope of a line</p> <p>-Use slope-intercept form in graphing a linear equation</p> <p>-Write a function rule for a word relationship</p> <p>-Write a function rule by analyzing a table or graph</p> <p>-Interpret and draw scatter plots</p> <p>-Use scatter plots to find trends</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p>	<p>Student Participation Journal Entry Graphing Calculator Activities</p> <p><b>Summative Assessments:</b> Chapter Test Rap Song - student(s) create a “catchy” tune that incorporates the concepts from the chapter.</p> <p><a href="#">Accommodations and Modifications</a></p>	<p>equations. Students must write and defend their choice on which linear equation has the steepest slope. (The three items given are an equation, table, and graph).</p> <p><b>Technology Standard:</b> 9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>
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	<p>of a function that has been described verbally.</p> <p><b>8.SP.A.</b> Investigate patterns of association in bivariate data.</p> <p><b>8.SP.A1</b> Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.</p> <p><b>8.SP.A2</b> Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit (e.g., line of best fit) by judging the closeness of the data points to the line.</p> <p><b>8.SP.A3</b> Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.</p> <p><b>8.SP.A4</b> Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical</p>	<p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b> Graphing Calculator Chromebook Google Classroom <a href="http://MathIXL.com">Math IXL</a> <a href="http://Prodigy.com">Prodigy</a> <a href="http://KahnAcademy.com">Kahn Academy</a></p> <p><b>Teacher Technology:</b> ActivView ActivPanel</p>		
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	variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.			
<p style="text-align: center;"><b>April-May</b></p> <p><b>Unit Title:</b> Systems of Equations</p>	<p><b>8.EE.B.5</b> Understand the connections between proportional relationships, lines, and linear equations. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.</p> <p><b>8.EE.C.8</b> Analyze and solve pairs of simultaneous linear equations.</p> <p><b>8.EE.C.8A</b> Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.</p> <p><b>8.EE.C.8B</b> Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.</p> <p><b>8.EE.C.8C</b> Solve real-world and mathematical problems leading to two linear equations in two variables.</p>	<p>-Solve systems of equations of linear equations by graphing</p> <p>-Solve systems of linear equations by using substitution and elimination methods</p> <p>-Solve real world problems that require two simultaneous equations</p> <p>-Solve systems of linear inequalities by graphing</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p>	<p><b>Formative Assessments:</b> Checkpoint Quiz Teacher Observation Homework/Classroom Student Participation Journal Entry</p> <p><b>Summative Assessments:</b> Chapter Test</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard: RI 8.7</b> In small groups, students have to decide whether graphing, substitution or the elimination method would be the most effective way to solve the problem.</p> <p><b>Technology Standard:</b> 9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>

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		<p>Teacher created resources</p> <p><b>Student Technology:</b>            Graphing Calculator            Chromebook            Google Classroom  <a href="#">Math IXL</a>  <a href="#">Prodigy</a>  <a href="#">Kahn Academy</a></p> <p><b>Teacher Technology:</b>            ActivView            ActivPanel</p>		
<p><b>May-June</b></p> <p><b>Unit Title:</b> Probability</p>	<p><b>S-CP</b> Understand independence and conditional probability and use them to interpret data</p> <p><b>S-CP.1.</b> Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).</p> <p><b>S-CP.2.</b> Understand that two events <math>A</math> and <math>B</math> are independent if the probability of <math>A</math> and <math>B</math> occurring together is the product of their probabilities, and use this characterization to determine if they are independent.</p> <p><b>S-CP.3.</b> Understand the conditional probability of <math>A</math> given <math>B</math> as <math>P(A</math> and</p>	<p>-Use a tree diagram and the Counting Principle</p> <p>-Find theoretical probability by counting outcomes</p> <p>-Calculate probabilities of independent or dependent events</p> <p>-Use permutations and combinations</p> <p>-Find experimental probability</p> <p>-Use simulations</p> <p>-Choose a sample for a survey of population</p>	<p><b>Formative Assessments:</b>            Checkpoint Quiz            Teacher Observation            Homework/Classroom            Student Participation            Journal Entry            Graphing Calculator            Activities</p> <p><b>Summative Assessments:</b>            Chapter Test</p> <p><a href="#">Accommodations and Modifications</a></p>	<p><b>Interdisciplinary Standard:</b>  <b>L.8.2.c</b> Students will write a summary of their findings when making predictions about populations based on given data. Students are expected to use correct grammar and spelling.</p> <p><b>Technology Standard:</b>            9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>



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	<p><math>B)/P(B)</math>, and interpret independence of <math>A</math> and <math>B</math> as saying that the conditional probability of <math>A</math> given <math>B</math> is the same as the probability of <math>A</math>, and the conditional probability of <math>B</math> given <math>A</math> is the same as the probability of <math>B</math>.</p>	<p>-Make estimates about populations</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b> Graphing Calculator Chromebook Google Classroom <a href="http://MathIXL.com">Math IXL</a> <a href="http://Prodigy.com">Prodigy</a> <a href="http://KahnAcademy.com">Kahn Academy</a></p> <p><b>Teacher Technology:</b> ActivView ActivPanel</p>		
<p style="text-align: center;"><b>June</b></p> <p><b>Unit Title:</b> Introduction to Polynomials (Brief</p>	<p><b>A-APR</b> Arithmetic with Polynomials and Rational Expressions</p> <p><b>Perform arithmetic operations on polynomials</b></p>	<p>- Adding and subtracting polynomials</p> <p>-Multiplying a polynomial by a polynomial</p>	<p><b>Formative Assessments:</b> Checkpoint Quiz Teacher Observation Homework/Classroom Student Participation</p>	<p><b>Interdisciplinary Standard: W.8.1</b> An “error” filled assessment is given to the students. Students must find the errors made based on the</p>

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<p>Introduction to Algebra)</p>	<p>1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials</p>	<p>-Multiplying binomials</p> <p><b>Instructional Resources:</b> Big Ideas Pre-Algebra Textbook</p> <p><a href="http://Kutasoftware.com">Kutasoftware.com</a></p> <p>Beyondtheworksheet.com (Lindsey Perro)</p> <p>Spiral review (Teacher created)</p> <p><a href="http://Math-Aids.com">Math-Aids.com</a></p> <p>Teacher created resources</p> <p><b>Student Technology:</b> Graphing Calculator Chromebook Google Classroom <a href="http://MathIXL">Math IXL</a> <a href="http://Prodigy">Prodigy</a> <a href="http://KahnAcademy">Kahn Academy</a></p> <p><b>Teacher Technology:</b> ActivView ActivPanel</p>	<p>Journal Entry Graphing Calculator Activities</p> <p><b>Summative Assessments:</b> Chapter Test</p> <p><b>Benchmark Assessments:</b> EOY Benchmark LinkIt Benchmark</p> <p><a href="#">Accommodations and Modifications</a></p>	<p>current topic and explain the error that was made. They will highlight the mistake and provide a clear explanation.</p> <p><b>Technology Standard:</b> 9.4.8.TL.6: Collaborate to develop and publish work that provides perspectives on a real-world problem.</p>
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**Alternate Assessments:** Scavenger Hunt (Exponents) - Activity that was graded as a classroom grade / Transformation Project - students create their own image on a quadrant of the coordinate plane - they must use various strategies to transform the image to the other three quadrants (Reflection/Translation/Rotation)

**21st Century Standards:** 9.1.8.A.2, 9.1.8.D.5

**21st Century Skills:** Critical thinking, Creativity, Collaboration, Communication & Technology Literacy

**Career Ready Practices:** CRP 2, CRP 4, CRP 6, CRP 8 & CRP11