SUBJECT: MATH   **GRADE: Eighth**   **TIMELINE: 2nd Quarter**

Standard	Kid Friendly Learning Objectives	Content (subject or topic covered in enVision Math)	DOK Level	Skills (ability, practice, aptitude that will be learned)	Assessment	Academic Vocabulary
8.NS.A Understand that there are irrational numbers, and approximate them using rational numbers. **8.NS.A.1** Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion. Know that numbers whose decimal expansions do not terminate in zeros or in a repeating sequence of fixed digits are called irrational. **8.NS.A.2** Use rational approximations of irrational numbers to compare the size of irrational numbers. Locate them approximately on a number line diagram, and estimate their values. **8.EE.A** Work with radicals and integer exponents. **8.EE.A.1** Understand and apply the	I can write repeating decimals as fractions. I can identify a number that is irrational. I can compare and order rational numbers. I can find square roots and cube roots of rational numbers. I can solve equations involving squares and cubes. I can use the properties of exponents to write equivalent expressions. I can write a number with a negative or zero exponent a different way. I can estimate large and small quantities using a power of 10. I can use scientific notation to write very large or very small quantities. I can perform operations with numbers in scientific notation.	Topic 1: Real Numbers	1, 2, & 3	• Rational Numbers as Decimals • Understand Irrational Numbers • Compare and Order Real Numbers • Evaluate Square Roots and Cube Roots • Solve Equations Using Square Roots and Cube Roots • Use Properties of Integer Exponents • More Properties of Integer Exponents • Use Powers of 10 to Estimate Quantities • Understand Scientific Notation • Operations with Numbers in Scientific Notation	• Topic Assessment • Quiz • Exit Ticket • Dot Check • Doc Cam (Show Me) • Threshold • Cold Call • Wait Time • Circulate • Turn and Talk • **OWN AND TRACK**	Irrational numbers Perfect square Square root Cube root Perfect cube Power of products property Product of powers property Quotient of powers property Scientific notation Fraction Integer Repeating decimal Terminating decimal

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properties of integer exponents to generate equivalent numerical expressions. **8.EE.A.2** Use square root and cube root symbols to represent solutions to equations of the form $x2 = p$ and $x3= p$, where p is a positive rational number. Know that $\sqrt{2}$ is irrational. a. Evaluate square roots of perfect squares less than or equal to 225. b. Evaluate cube roots of perfect cubes less than or equal to 1000. **8.EE.A.3** 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 express how many times larger or smaller one is than the other. **8.EE.A.4** Perform operations with						

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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.						
8.EE.B Understand the connections between proportional relationships, lines, and linear equations. **8.EE.B.5** Graph proportional relationships interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed. **8.EE.B.6** Use similar triangles to explain why the slope m is	I can solve equations that have like terms on one side. I can solve equations with variables on both sides of the equal sign. I can solve multistep equations and pairs of equations using more than one approach. I can determine the number of solutions an equation has. I can compare proportional relationships represented in different ways. I can understand the slope of a line. I can write equations to	Topic 2: Analyze and Solve Linear Equations	1, 2, & 3	• Combine Like Terms to Solve Equations • Solve Equations with Variables on Both Sides • Solve Multistep Equations • Equations with No Solutions or Infinitely Many Solutions • Compare Proportional Relationships • Connect Proportional Relationships and Slope • Analyze Linear Equations: $y = mx$ • Identify the y-intercept of a Line • Analyze Linear	• Topic Assessment • Quiz • Exit Ticket • Dot Check • Doc Cam (Show Me) • Threshold • Cold Call • Wait Time • Circulate • Turn and Talk • **OWN AND TRACK**	Inverse operations Like terms Proportion Variables y-intercept slope-intercept form

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the same between any two distinct points on a non-vertical line in the coordinate plane. Derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at (0, b). **8.EE.C** Analyze and solve linear equations, inequalities, and pairs of simultaneous linear equations. **8.EE.C.7** Fluently solve linear equations and inequalities in one variable. a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solution. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).	describe linear relationships. I can find the y-intercept of a graph and explains what it means. I can derive the equation y = mx + b.			Equations: $y = mx + b$		

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b. Solve linear equations and inequalities with rational number coefficients, including solutions that require expanding expressions using the distributive property and collecting like terms.						

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