

Pre-Algebra Accelerated Grade 7 EWMMS

Unit 1 Number Sets and Number Sense

(Unit total 43 days)

Part 1: Adding and Subtracting Integers (12 days)	Part 2: Multiplying and Dividing Integers (10 days)	Part 3: Writing/interpreting number sentences from/to word problems for integers (5 days)
Topics Lesson 1: Introduction to adding and subtracting Integers Lesson 2: Adding integers with same sign Lesson 3: Adding integers with different signs Lesson 4: Subtracting integers Lesson 5: Applying addition and subtraction of integers Lesson 6: Adding integers in variable expressions with same and different signs Lesson 7: Subtracting integers in variable expressions Lesson 8: Applying addition and subtraction of integers in variable expressions	Topics Lesson 9: Multiplying Integers with same and different signs Lesson 10: Dividing Integers with same and different signs Lesson 11: Difference between an expression and an equation Lesson 12: Combine like terms; combining variables with an exponent Lesson 13: Applying operations with integers Lesson 14: Order of operations with Integers	Topics Lesson 15: Writing an equation or expression from a situational word problem. Lesson 16: Writing a situational word problem from an expression, or equation. Students will be able to write a word problem from an expression or equation.

Part 4: Converting Decimals and Fractions (5 days)	Part 5: Rational Numbers and Decimals (6 days)	Part 6: Translating Number Sentences and Word Problems (3days)
Topics Lesson 17 - Convert rational numbers into an equivalent fraction. Lesson 18: Convert repeating and terminating decimals into an equivalent fractional Lesson 19: Ordering Real Numbers – square roots, rational, irrational numbers	Topics Lesson 20: Rational Numbers and Decimals Lesson 21: Adding Rational Numbers Lesson 22: Subtracting Rational Numbers Lesson 23: Multiplying Rational Numbers Lesson 24: Dividing Rational Numbers	Topics Lesson 25: write and interpret rational and irrational decimals into number sentences and word problems Lesson 26: write and interpret number sentences and word problems into rational and irrational decimals

Unit 2 Exponents

(Unit total 22 days)

Part 1: Exponents (6 days)	Part 2: Prime Factorization, GCF and LCM (4 days)	Part 3: Square and Cube roots (6 days)
Topics Lesson 1 – Develop and use integer exponents – including positive, zero Lesson 2 – Develop and use integer exponents – include negative Lesson 3 – Develop and use fractional exponents Lesson 4 - Laws of exponents when multiplying and dividing monomials	Topics Lesson 5 - Prime Factorization Lesson 6- Find the GCF Lesson 7 - LCM using the ladder method and the calculator	Topics Lesson 8 - Evaluate square/cube roots Lesson 8a -Radicals and fractional exponents Lesson 9- Rational approximations of irrational numbers Lesson 10 - Finding and Evaluating radicals.

Part 4: Scientific notation (4 days)		
Topics Lesson 11 - Converting to/from standard form Lesson 12 – Using scientific notation to express very small quantities Lesson 13 - Comparing numbers written in scientific notation Lesson 14 – Operations using scientific notation		

Unit 3 Expressions, Equations, and Inequalities

(Unit total 24 days)

Part 1: Algebraic expressions (5 days)	Part 2: One-step linear equations(4 days)	Part 3: Multi-step linear equations (8 days)
Topics Lesson 1 - Evaluate Lesson 2 - Simplifying Lesson 3 - Apply properties of operations	Topics Lesson 4 - Solving one step equations with rational coefficients to solve problems Lesson 5 - Use variables to represent quantities in a real world or mathematical problem Lesson 6 - Emphasize writing and solving equations from word problems	Topics Lesson 8 – Writing a two step equation Lesson 9 - Solve multi step equations with variables on both sides of equation Lesson 10 - Construct and solve multi-step equations from word problems

Part 4: Inequalities (5 days)		
Topics Lesson 11 - One-step inequalities solving, graphing and word problems Lesson 12 - Two-step inequalities solving, graphing and word problems Lesson 13 - Solve and Interpret solutions of inequalities in the context of the problem		

Unit 4 Ratio and Proportion

(Unit total 25 days)

Part 1: Ratios and rates – including unit rates (23 days)		
Topics Lesson 1 - Compute and Use unit rates Lesson 2 - Identify the Constant of Proportionality (Unit Rate) in multiple representations Lesson 3 - Recognize and Represent Proportional Relationships between Quantities Lesson 4 – Represent and analyze proportional relationships with equations and graphs Lesson 5 - Review Methods for Finding Percent and percent change Lesson 6 - Applications of Percents Lesson 7 – Application of percents to find total cost Lesson 8 - Proportions- Including Word Problem Lesson 9 - Graphs of a Proportional Relationships and applications		

Unit 5 Linear relation/Functions, Equations and Lines

(Unit total 48 days)

Part 1: Introduction to Functions (10 days)	Part 2: Relating Equations to Graphs and Functions (10 days)	Part 3: Recognizing slope as rate of change, and slope and y intercept from graph or equation (15 days)
Topics Lesson 1 - Review plotting points on coordinate plane Lesson 2 - Rules of functions Lesson 3 - Relations vs function Lesson 4 - Analyze coordinates to determine if relation is a function Lesson 5 - Analyze graphs to determine if a relation is a function	Topics Lesson 6 - Graphic representation of a pattern from an equation or table of data Lesson 7 - Create algebraic patterns using charts, graphs, equations and expressions. Lesson 8 - Graphs of equation in two variables Lesson 9 - Interpret the point/slope in a linear function Lesson 10 - Interpret the slope/intercept in a linear function Lesson 11 - Create equations with two variables to represent relationships between quantities Lesson 12 - Graph equations with two variables on a coordinate plane Lesson 13 - Determine whether a point is in the solution set of the linear equation	Topics Lesson 14 - Construct a function to model a linear relationship between two quantities Lesson 15 - Determine the rate of change and initial value of the function Lesson 16 - Determine types of slopes from a graph and given two points Lesson 17 - Interpret slope (rate of change) and initial value of line functions in applications Lesson 18 - Graph proportional relationship and interpret the unit rate as the slope of the graph Lessons 19 - Compare two different proportional relationships multiple representations Lesson 20 - Find the slope and y-intercept from a graph Lesson 21 - Find slope and y-intercept from an equation and given 2 points Lesson 22 - Interpret key features of graphs and tables in terms of the quantities Lesson 23 - Graph linear equations using slope-intercept method

<p>Part 4: Sketching graphs based on verbal relationship and comparing functions that are represented algebraically, graphically, or numerically (10 days)</p>		
<p>Topics Lesson 24 - Sketch graphs showing key features given in a verbal description of the relationship Lesson 25 - Compare properties of two functions represented algebraically Lesson 26 - Compare properties of two functions represented graphically Lesson 27 - Compare properties of two functions represented numerically Lesson 28 - Compare properties of two functions represented by verbal descriptions Lesson 29 - Describe qualitatively the functional relationship between two quantities by analyzing a graph. Lesson 30 - Sketch a graph that features the function described verbally</p>		