

COURSE: Algebra 15:1 Level 1
GRADE LEVEL: 9

MAIN/GENERAL TOPIC:	SUB-TOPIC:	ESSENTIAL QUESTIONS:	WHAT THE STUDENTS WILL KNOW OR BE ABLE TO DO:	SKILLS:	WHEN STUDENT DOES IT:	ASSESSMENTS:
NUMBER THEORY	<ul style="list-style-type: none"> Real Numbers 	<ul style="list-style-type: none"> Are all numbers the same? How many numbers are there? 	<ul style="list-style-type: none"> Explain Real Numbers Explain what makes a number rational or irrational. 	<ul style="list-style-type: none"> Differentiate among different sets of Real Numbers 	September	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Number Lines 	<ul style="list-style-type: none"> Does every number have a place on the number line? 	<ul style="list-style-type: none"> Locate points on a number line. Compare values on a number line. 	<ul style="list-style-type: none"> Use a number line to compare number values. 	September	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Signed Numbers 	<ul style="list-style-type: none"> Is a positive 2 smaller or larger than a negative 10? 	<ul style="list-style-type: none"> Add/subtract/multiply/divide using a graphing calculator 	<ul style="list-style-type: none"> Calculator skills Understand the four mathematical operations 	September	<ul style="list-style-type: none"> Teacher generated tests and worksheets Unit Project
OPERATIONS AND PROPERTIES	<ul style="list-style-type: none"> Order of Operations 	<ul style="list-style-type: none"> Can you do operations in any order? 	<ul style="list-style-type: none"> Follow the rules of PEMDAS 	<ul style="list-style-type: none"> Understand PEMDAS and how to apply it 	October	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Properties and Operations 	<ul style="list-style-type: none"> Can all properties be used with all operations? 	<ul style="list-style-type: none"> Identify and use the three basic properties: distributive, commutative, and associative 	<ul style="list-style-type: none"> Use appropriate properties when prompted 	October	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Exponents 	<ul style="list-style-type: none"> What is an exponent? 	<ul style="list-style-type: none"> Identify base, power, exponent 	<ul style="list-style-type: none"> Evaluate expressions that include exponents 	October	<ul style="list-style-type: none"> Teacher generated tests and worksheets

	<ul style="list-style-type: none"> Evaluating Expressions 	<ul style="list-style-type: none"> What role does PEMDAS play in evaluating expressions? 	<ul style="list-style-type: none"> Use signed numbers and PEMDAS to evaluate algebraic expressions. 	<ul style="list-style-type: none"> Use signed numbers correctly by enclosing them in (). 	October	<ul style="list-style-type: none"> Teacher generated tests and worksheets
SOLVING EQUATIONS	<ul style="list-style-type: none"> Variables 	<ul style="list-style-type: none"> What is a variable? 	<ul style="list-style-type: none"> Variables in expressions/equations 	<ul style="list-style-type: none"> Understand basic algebraic terminology 	November	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Algebraic Expressions 	<ul style="list-style-type: none"> What is a like term? 	<ul style="list-style-type: none"> Add/subtract/multiply/divide monomials and polynomials 	<ul style="list-style-type: none"> Use basic operations with variables 	November	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Solving Equations 	<ul style="list-style-type: none"> How do you solve equations? 	<ul style="list-style-type: none"> Follow steps to solve one and two step equations Choose appropriate strategies Combine strategies 	<ul style="list-style-type: none"> Employ different strategies in solving equations 	November	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Solving Inequalities 	<ul style="list-style-type: none"> What is an inequality? How is it different than an equation? 	<ul style="list-style-type: none"> Identify inequalities in problems. Graph inequalities on a number line. 	<ul style="list-style-type: none"> Use a number line to graph a solved inequality 	November	<ul style="list-style-type: none"> Teacher generated tests and worksheets
SOLVING WORD PROBLEMS	<ul style="list-style-type: none"> Verbal Phrases 	<ul style="list-style-type: none"> Twice a number means what? 	<ul style="list-style-type: none"> Recognize the difference between expressions and equations 	<ul style="list-style-type: none"> Be familiar with verbal algebraic phrases. 	December/January	<ul style="list-style-type: none"> Teacher generated tests and worksheets
	<ul style="list-style-type: none"> Word Problems 	<ul style="list-style-type: none"> How does using variables help us solve problems? 	<ul style="list-style-type: none"> Recognize verbal phrases that translate into algebraic terms Use let statements 	<ul style="list-style-type: none"> Create and solve algebraic equations 	December/January	<ul style="list-style-type: none"> Teacher generated tests and worksheets
COORDINATE GEOMETRY	<ul style="list-style-type: none"> Slope & Y-intercept 	<ul style="list-style-type: none"> What does the slope tell us? What is the y-intercept? 	<ul style="list-style-type: none"> Identify lines as having positive/negative/zero/undefined slopes Identify the slope in a $y=mx+b$ equation 	<ul style="list-style-type: none"> Recognize the four different slopes 	February / March	<ul style="list-style-type: none"> Teacher generated tests and worksheets

	<ul style="list-style-type: none"> • Calculation of Slope 	<ul style="list-style-type: none"> • How can you find the slope? 	<ul style="list-style-type: none"> • Find the slope of a line given the graph 	<ul style="list-style-type: none"> • Understand what slope tells us 	February / March	<ul style="list-style-type: none"> • Teacher generated tests and worksheets
	<ul style="list-style-type: none"> • Graphing 	<ul style="list-style-type: none"> • How do we use the equation of a line to graph that line? 	<ul style="list-style-type: none"> • Graph lines with positive/negative/zero/undefined slopes 	<ul style="list-style-type: none"> • Identify slopes from visual representations of a line 	February / March	<ul style="list-style-type: none"> • Teacher generated tests and worksheets
	<ul style="list-style-type: none"> • Linear Relationships 	<ul style="list-style-type: none"> • What are parallel lines? 	<ul style="list-style-type: none"> • Use slope to identify lines that are parallel. 	<ul style="list-style-type: none"> • Determine if lines are parallel by comparing the slopes 	February / March	<ul style="list-style-type: none"> • Teacher generated tests and worksheets
STATISTICS	<ul style="list-style-type: none"> • Collecting Data 	<ul style="list-style-type: none"> • What is bias? 	<ul style="list-style-type: none"> • Collect appropriate data 	<ul style="list-style-type: none"> • Understand how bias affects data collection 	April/May	<ul style="list-style-type: none"> • Teacher generated tests and worksheets
	<ul style="list-style-type: none"> • Organizing Data 	<ul style="list-style-type: none"> • How can data be represented? 	<ul style="list-style-type: none"> • Understand the different ways to organize data and be able to interpret a given table or chart • Use calculator to build a box and whisker graph 	<ul style="list-style-type: none"> • Understand statistic tables and graphs 	April/May	<ul style="list-style-type: none"> • Teacher generated tests and worksheets
	<ul style="list-style-type: none"> • Central Tendency 	<ul style="list-style-type: none"> • How can data lie? 	<ul style="list-style-type: none"> • Understand mean, median, mode and range • Be able to calculate above using a graphing calculator 	<ul style="list-style-type: none"> • Understand central tendencies 	April/May	<ul style="list-style-type: none"> • Teacher generated tests and worksheets