

# **MATH I – COURSE OF STUDY AND SYLLABUS**

2015-2016 Academic School-Year

## **1<sup>st</sup> Marking Period**

### Chapter 1: Variables, Function Patterns, and Graphs (Test 1.1-1.3)

1.1 Using Variables (*CC.9-12.A.SSE.A.1a, CC.9-12.A.CED.A.*)

1.2 Exponents and Order of Operations (*CC.6.EE.A.1, CC.9-12.A.SSE.A.1, CC.9-12.A.SSE.A.1a,b, CC.6.EE.A.2a,b,c*)

1.3 Exploring Real Numbers (*CC.9-12.A.RN.A*)

### Chapter 1: Variables, Function Patterns, and Graphs (Test 1.4-1.6)

1.4 Patterns and Functions (*CC.9-12.A.IF.A.1, CC.9-12.A.IF.A.2, CC.9-12.A.IF.A.3*)

1.5 Scatter Plots (*CC.8.SP.A.1, CC.9-12.A.IF.A.4*)

1.6 Mean, Median, Mode and Range (*CC.6.SP.B.5c*)

## **2<sup>nd</sup> Marking Period**

### Chapter 2: Rational Numbers

2.1, 2.2., 2.3 Use Integers and Rational Numbers: Adding, Subtracting, Multiplying and Dividing (*CC.6.EE.A.3, CC.9-12.A.APR.D, CC.9-12.A.RN.B; CC.9-12.A.RN.B.3*)

**\* Focus on classifying the number sets**

2.4 The Distributive Property (*CC.9-12.A.SSE.A.2*)

2.5 Properties of Numbers (*CC.9-12.A.APR.D, CC.9-12.A.RN.B; CC.9-12.A.RN.B.3*)

## **3<sup>rd</sup> Marking Period**

### Chapter 3: Solving Linear Equations (Test 3.1 to 3.3)

3.1 Solve Two-Step Equations (*CC.9-12.A.CED.A.1, CC.9-12.A.REI.A.1, CC.9-12.A.REI.B.3*)

3.2 Solve Multi-Step Equations (*CC.9-12.A.CED.A.1, CC.9-12.A.REI.B.3*)

3.3 Solve Equations with Variables on Both Sides (*CC.9-12.A.CED.A.1, CC.9-12.REI.B.3, CC.9-12.A.REI.D.11*)

### Chapter 3: Solving Linear Equations (Test 3.4-3.7)

3.4 Ratios and Proportions (*CC.9-12.A.B.A.1, CC.9-12.A.REI.B.3*)

3.5 Proportions and Similar Figures (*CC.9-12.A.CED.A.1, CC.9-12.A.REI.B.3*)

3.6 Equations and Problem Solving (*CC.9-12.A.CED.A.1, CC.9-12.A.BF.A.1, CC.9-12.A.REI.A.1; CC.9-12.A.REI.B.3*)

3.7 Finding Percent of Change (*CC.7.7.RP.A.3*)

## **4<sup>th</sup> Marking Period**

### Chapter 4: Solving and Graphing Linear Inequalities (Test 4.1-4.3)

4.1 Inequalities and Their Graphs (*CC.9-12.A.CED.A.1, CC.9-12.A.CED.A.3, CC.9-12.A.REI.B.3*)

4.2 Solve Inequalities Using Addition and Subtraction (*CC.9-12.A.CED.A.1, CC.9-12.A.CED.A.3, CC.9-12.A.REI.B.3*)

4.3 Solve Inequalities Using Multiplication and Division (*CC.9-12.A.CED.A.1, CC.9-12.A.CED.A.3, CC.9-12.A.REI.B.3*)

### Chapter 4: Solving and Graphing Linear Inequalities (Test 4.4-4.6)

4.4 Solve Multi-Step Inequalities (*CC.9-12.A.CED.A.1, CC.9-12.A.CED.A.3*)

4.5 Solve Compound Inequalities (*CC.9-12.A.CED.A.1, CC.9-12.A.CED.A.3*)

4.6 Solve Absolute Value Inequalities (*CC.9-12.A.CED.A.1, CC.9-12.A.CED.A.3*)

## **Course Expectations and Skills**

- Maintain a binder.
- Participate actively in class discussions and group work.
- Learn by doing, not just watching.
- Learn by both listening and talking. Students will learn as much from classmates' questions, answers, ideas, and mistakes as from their own.
- Work to understand the concepts and ideas in the course, not just learning skills and procedures. Memorizing the steps will not be enough to succeed.
- Expect that there will be concepts that are not grasped immediately. Learn to be persistent in thinking and problem solving.
- Ask questions during discussions, within a group setting, and after school.
- Do homework every day.
- Seek help from your teacher, classmates, or other resources.
- Students will work on ALEKS at least 2 times per week.

## **Resources**

- Algebra I – Prentice Hall Mathematics
- ALEKS – Web-based assessment and learning system.
- Kuta Software
- Boardworks Lessons

## **Grading Scale**

|     |   |
|-----|---|
| 20% | Tests, projects and technology activities   |
| 50% | Homework, classwork, ALEKS, and binder      |
| 30% | Boardwork, warm-ups and class participation |

# Black Horse Pike Regional School District Curriculum

ENGAGING STUDENTS • FOSTERING ACHIEVEMENT • CULTIVATING 21<sup>ST</sup> CENTURY GLOBAL SKILLS

## MATH FOUNDATIONS I

### PART I: UNIT RATIONALE

#### WHY ARE STUDENTS LEARNING THIS CONTENT AND THESE SKILLS?

|   |  |
|---|--|
| <p><b>Course/Unit Title:</b><br/>Algebra 1 – Chapter 1<br/>Variables, Functions and<br/>Graphs</p> <hr/> <p><b>Grade Level(s):</b> 9-12</p>   | <p><b>Unit Summary:</b><br/>In this unit, students will model relationships using variables, expressions, and equations. They will apply the order of operations to simplify and evaluate expressions with grouping symbols such as: parenthesis, fraction bars, and absolute value symbols. Exploring real numbers, they classify and order numbers, use counter examples and find absolute values. Finally, students find the mean, median, mode, and range for data sets.</p> |
| <p><b>Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>• How do you model relationships with variables and equations?</li> <li>• How do you simplify and evaluate expressions.</li> <li>• How do classify and compare numbers?</li> <li>• How do you find the central tendencies of data?</li> </ul> | <p><b>Enduring Understanding(s):</b><br/>Students will be able to:</p> <ul style="list-style-type: none"> <li>• Model relationships with variables</li> <li>• Model relationships with equations.</li> <li>• Simplify and evaluate expressions and formulas</li> <li>• Simplify and evaluate expressions containing grouping symbols.</li> <li>• To classify numbers</li> <li>• To compare numbers</li> <li>• To find mean, median, mode and range</li> </ul>                    |

### PART II: INSTRUCTIONAL STRATEGIES AND RESOURCES

#### DESCRIBE THE LEARNING TARGETS.

After each target, identify the NJCCCS or Common Core Standards that are applicable

| <u>Learning Target</u>   | <u>NJCCCS or CCS:</u>   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Write and evaluate numerical expressions involving whole-number exponents.</li> <li>2. Write, read, and evaluate expressions in which letters stand for numbers.               <ol style="list-style-type: none"> <li>a. Write expressions that record operations with numbers and with letters standing for numbers.</li> <li>b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.</li> <li>c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).</li> </ol> </li> <li>3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational</li> <li>4. Giving quantitative measures of center (median and/or Mean and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.</li> </ol> | <ol style="list-style-type: none"> <li>1. MA.6.CCSS.Math.Content.6.EE.A.1</li> <li>2. MA.6.CCSS.Math.Content.6.EE.A.2a, b, c</li> <li>3. MA.9-12.CCSS.Math.Content.HSN-RN.B.3</li> <li>4. MA.6.CCSS.Math.Content.6.SP.B.5c</li> </ol> |

### Inter-Disciplinary Connections:

Real-World problem solving examples:

Cost of CDs given a number of CDs p. 5; Cost of shopping and making change p. 6; Cost and sales tax p. 11; Urban planning p. 12; Finding measures of central tendency to describe a line plot p. 41.

### Students will engage with the following text:

Pearson, Algebra 1, 2009, by Prentice Hall Mathematics Publishing

Larson Algebra 1 2011 by Houghton Mifflin Harcourt Publishing Group (*supplemental*)

### Students will write:

Writing/Open Ended questions:

Chapter 1-1: Why do you sometimes need variables when writing equations to represent real-world situations?

Chapter 1-2: Ask students to explain why the rules for the order of operations are necessary.

Chapter 1-3: What is a rational number? How can you express an integer as a rational number?

Chapter 1-4: Ask students to group these terms into two related lists: range, domain, x-value, y value, dependent, and independent. Ask them to explain their choices.

Chapter 1-6: When should the mean be used to describe data and when should the median be used?

What measure(s) are easy to find from a stem-and-leaf plot?

## **PART III: TRANSFER OF KNOWLEDGE AND SKILLS**

### **DESCRIBE THE LEARNING EXPERIENCE.**

#### **How will students uncover content and build skills.**

Students will uncover and build skills through various classroom activities. Investigating algebra activities, modeling examples, using real-life application, using note-taking strategies, and using SMARTBoard technologies will all be explored. Other learning experiences could include alternative lesson openers, math and history applications, problem-solving workshops, interdisciplinary applications and extra examples of problem solving. In addition, students will use ALEKS to individualize the lessons.

#### **Suggested warm-up activities, instructional strategies/activities, and assignments:**

### **CHAPTER 1**

#### **Section 1.1:**

|   | <b>College Prep</b>   |
|---|---|
| <b>Focus and Motivate</b><br><b>Starting Options</b>            | <ul style="list-style-type: none"><li>• Warm-Up (Check Skills You'll Need): TE p. 4 #1-4</li><li>• Math Background TE p. 3</li><li>• Vocabulary Introduction</li></ul>  |
| <b>Teach</b><br><b>Teaching Options</b>                         | <ul style="list-style-type: none"><li>• Essential Question: TE p. 4</li><li>• Classroom Activity: Online Active Math</li><li>• Daily Notetaking Guide All in One Student Workbook p. 2</li><li>• Guided Problem Solving All in One Student Workbook 1-1 p. 236</li><li>• Examples 1–6: p. 4-6</li><li>• Additional Examples TE p. 5</li><li>• Chapter Resource Book Grab and Go File Chapter 1 p. 1</li></ul> |
| <b>Checking for Understanding</b>                               | <ul style="list-style-type: none"><li>• Guided Problem Solving All in One Student Workbook 1-1 p. 236</li><li>• Guided Practice 1-1 Exercises: p. 6-7</li><li>• Closing the Lesson: TE Quick Check Problems 1–6 p. 4-6</li></ul>  |
| <b>Practice and Apply</b><br><b>Assigning Homework</b>          | <ul style="list-style-type: none"><li>• Average: Day 1: 6 #1-16 Expressions</li><li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li><li>• Kuta Software: Pre-Algebra</li></ul>   |
| <b>Assess and Reteach</b><br><b>Differentiating Instruction</b> | <ul style="list-style-type: none"><li>• Study Guide: Chapter Resource Book Reteaching p. 7</li><li>• ALEKS</li><li>• Kuta Software: Pre-Algebra</li></ul>   |

|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>Enrichment: Chapter Resource Book p. 13</li> </ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>Students create a foldable of Key words that represent mathematical words for expressions and equations.</li> <li>Students model process using cut outs of words and mathematical symbols to create expressions and equations.</li> <li>Have students work in pairs. Each student writes an equation. Students exchange equations. Then, they write a situation that can be modeled by the equation, define the variables, and solve for a particular event.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>           |
| <b>Section 1.2:</b>                                       |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>Vocabulary Review</li> <li>Warm-Up (Check Skills You'll Need): TE p. 4 #1-4</li> <li>Math Background TE p. 3</li> </ul>   |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>Essential Question: TE p. 9</li> <li>Classroom Activity: Online Active Math</li> <li>Daily Notetaking Guide All in One Student Workbook p. 4</li> <li>Guided Problem Solving All in One Student Workbook 1-2 p. 237</li> <li>Examples 1–7: PE pp. 9-12</li> <li>Quick Check Problems 1–4 p. 9-12</li> <li>Additional Examples TE p. 11</li> <li>Chapter Resource Book Grab and Go File Chapter 1 p. 2</li> </ul>  |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 1-2 p. 238</li> <li>Guided Practice Exercises: p. 10-11</li> <li>Closing the Lesson: TE Quick Check 1-4</li> </ul>   |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: 6 #2-32 even</li> <li>Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book Reteaching p. 7</li> <li>ALEKS</li> <li>Kuta Software: Pre-Algebra</li> <li>Enrichment: Chapter Resource Book p. 13</li> </ul>   |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>Students create a foldable of to remember the order of operations.</li> <li>Student can act out activities that work only when done in the correct order, such as putting on socks, shoes, and tying laces. Point out the parallel to the agreed-upon order of operation in mathematics.</li> <li>Remind students to write out all intermediate steps when simplifying and evaluating expressions. This will help them gain a better understanding and prevent errors.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |
| <b>Section 1.3:</b>                                       |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>Introduce Vocabulary</li> <li>Warm-Up (Check Skills You'll Need): TE p. 17 #1-8</li> <li>Math Background TE p. 17</li> </ul>  |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>Essential Question: TE p. 17</li> <li>Classroom Activity: Online Active Math</li> <li>Daily Notetaking Guide All in One Student Workbook p. 4</li> <li>Examples 1–3: PE pp. 18</li> <li>Additional Examples TE p. 19</li> <li>Quick Check Problems 1–4 p. 9-12</li> <li>Chapter Resource Book Grab and Go File Chapter 1 p. 3</li> </ul>  |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 1-3 p. 240</li> <li>Guided Practice Exercises: p. 20-21</li> <li>Closing the Lesson: Quick Check Problems 1–4 p. 18-20</li> </ul>  |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: p. 20-21 #2-46 even</li> <li>Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>Kuta Software: Pre-Algebra</li> </ul>  |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book Reteaching p. 7</li> <li>ALEKS</li> <li>Kuta Software: Pre-Algebra</li> <li>Enrichment: Chapter Resource Book p. 15</li> </ul>   |

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| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>• Students create a Venn diagram using construction paper of the Real Number System. Have students place examples of all types of real numbers on the diagram.</li> <li>• Mark a number line on the floor and have students walk from various integers in their path. How many steps did you take? What do the positive and negative signs indicate?</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>                                 |
|   |  |
| <b>Section 1.6:</b>                                       | <b>College Prep</b>  |
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>• Introduce Vocabulary</li> <li>• Warm-Up (Check Skills You'll Need): TE p. 40 #1-6</li> <li>• Math Background TE p. 40</li> </ul>  |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 40</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 10</li> <li>• Examples 1–3: PE pp. 41-42</li> <li>• Additional Examples TE p. 42</li> <li>• Chapter Resource Book Grab and Go File Chapter 1 p. 6</li> </ul>  |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 1-6 p. 245</li> <li>• Guided Practice Exercises: p. 43-44</li> <li>• Closing the Lesson: Quick Check Problems 1–3 p. 41-42</li> </ul>  |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 43-44 #1-17</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 12</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 18</li> </ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>• Explain that a measure of central tendency is a way of letting just one number (such as the mean) stand for all the numbers in the data set. This lesson explores several ways of finding the best single number to represent the set.</li> <li>• Challenge students to create a data set of seven consecutive integers where the media is equal to the mean and there is no mode.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |

## PART IV: EVIDENCE OF LEARNING

IDENTIFY THE METHODS BY WHICH STUDENTS WILL DEMONSTRATE THEIR UNDERSTANDING OF CONTENT AND THEIR ABILITY TO APPLY SKILLS.  
IDENTIFY BLOOM'S LEVELS.



### Formative Assessments:

The effectiveness of the instructional program will be based on teacher observations, students doing quality work together, questioning strategies, self and peer assessment, student record-keeping, quizzes, essays, journal writing, performance tasks, diagnostic tests, homework, and projects.

### Accommodations/Modifications:

Use manipulatives to build patterns or represent symbols.  
Provide Graphic organizers to use in solving problems.  
Provide guided notes/handouts.  
Provide visual glossaries, blank number lines for use with positive and negative numbers.  
Break problems into smaller pieces.  
Have students keep and turn in a notebook.  
Allow students to use calculator.  
Review needed skills prior to the lesson.  
Provide checklists for solving problems.  
Vocabulary 1A: Graphic Organizer p. 247 All-in-one Student Workbook  
Vocabulary 1B: Reading Comprehension p. 248 All-in-one Student Workbook  
Vocabulary 1C: reading/Writing Math Symbols p. 249 All-in-one Student Workbook  
Vocabulary 1D: Visual Vocabulary Practice p. 250 All-in-one Student Workbook  
Vocabulary 1E: Vocabulary Check p. 251 All-in-one Student Workbook  
Vocabulary 1F: Vocabulary Review p. 253 All –in –one Student Workbook

*(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).*

### Summative Assessments:

Periodic benchmark tests, chapter tests, state assessments, PSATs, End of Course tests, and SATs



## CHAPTER 2

### PART I: UNIT RATIONALE

#### WHY ARE STUDENTS LEARNING THIS CONTENT AND THESE SKILLS?

|  |  |
|--|--|
| <b>Course/Unit Title:</b><br><b>Algebra 1 – Chapter 2</b><br><b>Rational Numbers</b><br><hr/> <b>Grade Level(s):</b> 9-12  | <b>Unit Summary:</b><br>In this unit, students will combine rational numbers by adding, subtracting, multiplying and dividing, by using Identity and Inverse Properties. They will also use matrices to add Real Numbers. They will combine the operations of addition and multiplication by using the distributive property. Finally the properties of Real Numbers are summarized and students identify which property they use as they simplify expressions.  |
| <b>Essential Question(s):</b> <ul style="list-style-type: none"><li>• How do you add, subtract, multiply and divide rational numbers?</li><li>• How do you use the distributive property?</li><li>• How do you simplify algebraic expressions?</li><li>• How do you identify properties and use deductive reasoning?</li></ul> | <b>Enduring Understanding(s):</b><br>Students will be able to: <ul style="list-style-type: none"><li>• Add rational numbers using models and rules.</li><li>• To apply addition.</li><li>• To subtract rational numbers using models and rules.</li><li>• To apply subtraction.</li><li>• To multiply and divide rational numbers using models and rules.</li><li>• To use the distributive property.</li><li>• To simplify algebraic expressions.</li><li>• To identify properties.</li><li>• To use deductive reasoning.</li></ul> |

### PART II: INSTRUCTIONAL STRATEGIES AND RESOURCES

#### DESCRIBE THE LEARNING TARGETS.

After each target, identify the NJCCCS or Common Core Standards that are applicable

|   |   |
|---|---|
| <b>Learning Target</b> <ol style="list-style-type: none"><li>1. Understand that rational expressions form a system analogous to the RATIONAL NUMBERS, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.</li><li>2. Apply the properties of operations to generate equivalent expressions.</li><li>3. Use properties of rational and irrational numbers.</li><li>4. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.</li></ol> | <b>NJCCCS or CCS:</b> <ol style="list-style-type: none"><li>1. MA.9-12.CCSS.Math.Content.HSA-APR.D.7</li><li>2. MA.6.CCSS.Math.Content.6.EE.A.3</li><li>3. MA.9-12.CCSS.Math.Content.HSN-RN.B</li><li>4. MA.9-12.CCSS.Math.Content.HSN-RN.B.3</li></ol> |
|---|---|

#### Inter-Disciplinary Connections:

Real-World problem solving examples:

Gains and losses on a football field p. 58, the temperature falling and rising p. 58; Finding the closing price of stock XYZ p. 66; Calculating the change in temperature in degrees Fahrenheit p. 71; Finding area of a basketball court p. 83; Using the properties to solve problems at the supermarket p. 87.

#### Students will engage with the following text:

Pearson, Algebra 1, 2009, by Prentice Hall Mathematics Publishing

Larson Algebra 1 2011 by Houghton Mifflin Harcourt Publishing Group (*supplemental*)

### Students will write:

**Writing/Open Ended questions:**

**Chapter 2-1: How do you add two real numbers that have different signs?**

**Chapter 2-2: Ask students to explain the process of subtracting integers?**

**Chapter 2-3: Ask students to state the rules for multiplying and dividing rational numbers in their own words.**

**Chapter 2-4: Ask students to describe an everyday situation in which using the distributive property and mental math would be helpful.**

**Chapter 2-5: Have the students write their own expressions and simplify them, justifying each step. Instruct them to repeat the process until they have used at least 5 of the properties discussed in this lesson.**

## **PART III: TRANSFER OF KNOWLEDGE AND SKILLS**

### **DESCRIBE THE LEARNING EXPERIENCE.**

#### **How will students uncover content and build skills.**

Students will uncover and build skills through various classroom activities. Investigating algebra activities, modeling examples, using real-life application, using note-taking strategies, and using SMARTBoard technologies will all be explored. Other learning experiences could include alternative lesson openers, math and history applications, problem-solving workshops, interdisciplinary applications and extra examples of problem solving. In addition, students will use ALEKS to individualize the lessons.

#### **Suggested warm-up activities, instructional strategies/activities, and assignments:**

### **CHAPTER 2**

#### **Section 2.1:**

|   | <b>College Prep</b>  |
|---|--|
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"><li>• Introduce Vocabulary</li><li>• Warm-Up (Check Skills You'll Need): TE p. 56 #1-12</li><li>• Math Background TE p. 56</li></ul>   |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"><li>• Essential Question: TE p. 56</li><li>• Classroom Activity: Online Active Math</li><li>• Daily Notetaking Guide All in One Student Workbook p. 17</li><li>• Examples 1–5: pp. 56-59</li><li>• Quick Check Problems 1–5 p. 56-59</li><li>• Additional Examples TE p. 59</li><li>• Chapter Resource Book Grab and Go File Chapter 2 p. 1</li></ul>  |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"><li>• Guided Problem Solving All in One Student Workbook 2-1 p. 256</li><li>• Guided Practice Exercises: p. 59-60 #1-24</li><li>• Closing the Lesson: TE Quick Check 1-5</li></ul>   |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"><li>• Average: Day 1: p. 59-60 #1-24</li><li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li><li>• Kuta Software: Pre-Algebra</li></ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"><li>• Study Guide: Chapter Resource Book Reteaching p. 8</li><li>• ALEKS</li><li>• Kuta Software: Pre-Algebra</li><li>• Enrichment: Chapter Resource Book p. 16</li></ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"><li>• Tape a number line on the floor. Let a volunteer stand at a number. Ask a student to state an integer. Have the volunteer move along the number line to add it. Repeat.</li><li>• Have students explore how to use matrix addition to perform translations of geometric figures drawn on a grid.</li><li>• Stress to students that when you add numbers with different signs, you actually find the difference in their absolute values. Remind students that the sum has the same sign as the addend with the greater absolute value.</li></ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |

| Section 2.2:  |   |
|---|---|
|   | College Prep  |
| <b>Focus and Motivate Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 64 #1-8</li> <li>• Math Background TE p. 64</li> </ul>   |
| <b>Teach Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 64</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 20</li> <li>• Examples 1–6: PE p. 64-66</li> <li>• Quick Check Problems 1–6 p. 64-66</li> <li>• Additional Examples TE p. 66</li> <li>• Chapter Resource Book Grab and Go File Chapter 2 p. 2</li> </ul> |
| <b>Checking for Understanding</b>                     | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 2-2 p. 259</li> <li>• Guided Practice Exercises: p. 66-67 #1-49</li> <li>• Closing the Lesson: TE Quick Check 1-5</li> </ul>  |
| <b>Practice and Apply Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 66-67 #2-48 even</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 9</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 17</li> </ul>  |
| <b>Accommodations/Modifications:</b>                  | <ul style="list-style-type: none"> <li>• Use modeling tiles.</li> <li>• Discuss debt and use money to show increasing or decreasing indebtedness or profit.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>  |

| Section 2.3:  |   |
|---|---|
|   | College Prep  |
| <b>Focus and Motivate Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. p. 69 #1-8</li> <li>• Math Background TE p. 69</li> </ul>  |
| <b>Teach Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 69</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 23</li> <li>• Examples 1–7: PE pp. 69-73</li> <li>• Quick Check Problems 1–7 p. 69-73</li> <li>• Additional Examples TE p. 71</li> <li>• Chapter Resource Book Grab and Go File Chapter 2 p. 3</li> </ul>  |
| <b>Checking for Understanding</b>                     | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 2-3 p. 260</li> <li>• Guided Practice Exercises: p. 73-74 #2-52 even</li> <li>• Closing the Lesson: TE Quick Check 1-7</li> </ul>   |
| <b>Practice and Apply Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 73-74 #2-52 even</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 10</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 18</li> </ul>   |
| <b>Accommodations/Modifications:</b>                  | <ul style="list-style-type: none"> <li>• Have students suggest a pair of integers with the same sign and a pair of integers with different signs. For each pair, have students find the sum, difference, and product. Then have students discuss the signs of the results.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |

| Section 2.4:                               |   |
|--|---|
|  | College Prep  |
| <b>Focus and Motivate Starting Options</b> | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. p. 69 #1-8</li> <li>• Math Background TE p. 69</li> </ul>  |
| <b>Teach Teaching Options</b>              | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 69</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 27</li> <li>• Examples 1–7: PE pp. 69-73</li> <li>• Quick Check Problems 1–7 p. 69-73</li> <li>• Additional Examples TE p. 71</li> </ul> |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"> <li>Chapter Resource Book Grab and Go File Chapter 2 p. 3</li> </ul>   |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 2-4 p. 262</li> <li>Guided Practice Exercises: p. 73-74 #2-52 even</li> <li>Closing the Lesson: TE Quick Check 1-7</li> </ul>   |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: p. 73-74 #2-52 even</li> <li>Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book Reteaching p. 12</li> <li>ALEKS</li> <li>Kuta Software: Pre-Algebra</li> <li>Enrichment: Chapter Resource Book p. 19</li> </ul>   |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>Use modeling tiles.</li> <li>Discuss debt and use money to show increasing or decreasing indebtedness or profit.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>  |
| <b>Section 2.5:</b>                                       |   |
|   | <b>College Prep</b>   |
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>Warm-Up (Check Skills You'll Need): TE p. p. 86 #1-9</li> <li>Math Background TE p. 86</li> </ul>  |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>Essential Question: TE p. 86</li> <li>Classroom Activity: Online Active Math</li> <li>Daily Notetaking Guide All in One Student Workbook p. 30</li> <li>Examples 1–3: PE pp. 87-88</li> <li>Quick Check Problems 1–3 p. 87-88</li> <li>Additional Examples TE p. 87</li> <li>Chapter Resource Book Grab and Go File Chapter 2 p. 4</li> </ul>  |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 2-5 p. 264</li> <li>Guided Practice Exercises: p. 88 #1-44</li> <li>Closing the Lesson: TE Quick Check 1-3</li> </ul>   |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: p. 88 #1-44</li> <li>Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book Reteaching p. 13</li> <li>ALEKS</li> <li>Kuta Software: Pre-Algebra</li> <li>Enrichment: Chapter Resource Book p. 20</li> </ul>   |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>Have students write down their own examples for each property of real numbers. Then write the algebraic example beneath each of their own examples.</li> <li>Compare the properties to the rules of a game. Point out that this is how, in mathematics, you know something is true, not because someone says so, but because you can show using properties, that it must be true.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |

## PART IV: EVIDENCE OF LEARNING

IDENTIFY THE METHODS BY WHICH STUDENTS WILL DEMONSTRATE THEIR UNDERSTANDING OF CONTENT AND THEIR ABILITY TO APPLY SKILLS. IDENTIFY BLOOM'S LEVELS.



### Formative Assessments:

The effectiveness of the instructional program will be based on teacher observations, students doing quality work together, questioning strategies, self and peer assessment, student record-keeping, quizzes, essays, journal writing, performance tasks, diagnostic tests, homework, and projects.

### Accommodations/Modifications:

Use manipulatives to build patterns or represent symbols.  
Provide Graphic organizers to use in solving problems.  
Provide guided notes/handouts.  
Provide visual glossaries, blank number lines for use with positive and negative numbers.  
Break problems into smaller pieces.  
Have students keep and turn in a notebook.  
Allow students to use a calculator.  
Review needed skills prior to the lesson.  
Provide checklists for solving problems.  
Vocabulary 2A: Graphic Organizer p. 269 All-in-one Student Workbook  
Vocabulary 2B: Reading Comprehension p. 270 All-in-one Student Workbook  
Vocabulary 2C: reading/Writing Math Symbols p. 271 All-in-one Student Workbook  
Vocabulary 2D: Visual Vocabulary Practice p. 272 All-in-one Student Workbook  
Vocabulary 2E: Vocabulary Check p. 273 All-in-one Student Workbook  
Vocabulary 2F: Vocabulary Review p. 275 All –in –one Student Workbook

*(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).*

### Summative Assessments:

Periodic benchmark tests, chapter tests, state assessments, PSATs, End of Course tests, and SATs

## PART I: UNIT RATIONALE

### WHY ARE STUDENTS LEARNING THIS CONTENT AND THESE SKILLS?

|  |   |
|--|---|
| <p><b>Course/Unit Title:</b><br/> <b>Algebra 1 – Chapter 3 Solving Linear Equations</b></p> <hr/> <p><b>Grade Level(s):</b> 9-12</p>   | <p><b>Unit Summary:</b><br/> <b>In this unit, students will use properties of equality to solve equations in one variable using properties of numbers and operations. They will also use properties of equality and the distributive property to solve equations with variables on both sides. Students will write ratios and solve proportions and rewrite equations in function form and solve literal equations for a given variable.</b></p>  |
| <p><b>Essential Question(s):</b></p> <ul style="list-style-type: none"> <li>• <b>How do you solve equations in one variable?</b></li> <li>• <b>How do you solve proportion and percent problems?</b></li> <li>• <b>How do you rewrite equations in two or more variables?</b></li> </ul> | <p><b>Enduring Understanding(s):</b><br/>         Students will be able to:</p> <ul style="list-style-type: none"> <li>• Solve one-step equations using algebra.</li> <li>• Solve two-step equations.</li> <li>• Solve multi-step equations.</li> <li>• Solve equations with variables on both sides of the equation.</li> <li>• To identify if equations are Identities and No Solutions.</li> <li>• Find ratios and write and solve proportions.</li> <li>• Solve proportions using cross-products.</li> <li>• Solve percent problems using a proportion.</li> <li>• Solve percent problems using equations.</li> <li>• Find a percent of change and identify it as an increase or decrease.</li> </ul> |

## PART II: INSTRUCTIONAL STRATEGIES AND RESOURCES

### DESCRIBE THE LEARNING TARGETS.

After each target, identify the NJCCCS or Common Core Standards that are applicable

|   |  |
|---|--|
| <p><b><u>Learning Target</u></b></p> <p><b>1. Solving Equations in One Variable</b><br/> <b>MA.9-12.A-CED.1</b> - [Standard] - Create equations and inequalities in one variable and use them to solve problems. -<br/> <b>MA.9-12.A-REI.1</b> - [Standard] - Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method<br/> <b>MA.9-12.A-REI.3</b> - [Standard] - Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters<br/> <b>MA.9-12.A-REI.11</b> - [Standard] - Explain why the x-coordinates of the points where the graphs of the equations <math>y = f(x)</math> and <math>y = g(x)</math> intersect are the solutions of the equation <math>f(x) = g(x)</math>; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where <math>f(x)</math> and/or <math>g(x)</math> are linear, polynomial, rational, absolute value, exponential, and logarithmic functions</p> <p><b>2. Solving Proportions and Percent Problems</b><br/> <b>MA.9-12.A-CED.1</b> - [Standard] - Create equations and inequalities in one variable and use them to solve problems.<br/> <b>MA.9-12.A-REI.3</b> - [Standard] - Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters</p> <p><b>3. Rewriting Equations in Two or More Variables</b><br/> <b>MA.9-12.N-Q.1</b> - [Standard] - Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. [<br/> <b>MA.9-12.A-CED.4</b> - [Standard] - Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving<br/> <b>MA.9-12.A-REI.3</b> - [Standard] - Solve linear equations and inequalities in one variable including equations with coefficients represented by letters</p> | <p><b><u>NJCCCS or CCS:</u></b></p> <p><b>1. MA.CC.9-12.A.CED.1, CC.9-12.A.REI.1, CC.9-12.A.REI.3, CC.9-12.A.REI.11</b></p> <p><b>2. MA. CC.9-12.A.CED.1, CC.9-12.A.REI.3</b></p> <p><b>3. MA. CC.9-12.N.Q.1, CC.9-12.A.CED.4, CC.9-12.A.REI.3</b></p> |
|---|--|

**Inter-Disciplinary Connections:**

Real-World problem solving examples:

Finding average speed of a runner (p. 137), crafts (p. 139), scuba diving (p. 143), car sales (p. 155), shopping (p. 183)

Inter-Disciplinary problem solving examples:

Bird migration (p. 139 and p. 150) box jellyfish (p. 139), dance lessons (p. 145), advertising (p. 145), using map scales (p. 170), using surveys to answer percent problems (p. 178), temperature equations (p. 186)

**Students will engage with the following text:**

Pearson, Algebra 1, 2009, by Prentice Hall Mathematics Publishing

Larson Algebra 1 2011 by Houghton Mifflin Harcourt Publishing Group (*supplemental*)

**Students will write:**

Writing/Open Ended questions:

Chapter 3-1 What order of operations should you use to solve two-step equations? P. 121;

Chapter 3-2 How can you clear an equation of fractions or decimals? P. 128;

Chapter 3-3 How is solving an equation with two variable terms on the same side of the equal sign different than solving an equation with variable terms on both sides of the equal sign? P. 136;

Chapter 3-4 Have students write a definition of a ratio and of a proportion in their own words. Then have them write directions for an absent student explaining how to solve a proportion. P. 144;

Chapter 3-5 How can you use proportions to find a distance that is difficult to measure? P. 151;

Chapter 3-6 What are two ways to help set up distance problems like the ones in this lesson? P. 161;

Chapter 3-7 Have students describe the difference between finding percent and finding percent of change. P. 170

**PART III: TRANSFER OF KNOWLEDGE AND SKILLS**

**DESCRIBE THE LEARNING EXPERIENCE.**

**How will students uncover content and build skills.**

Students will uncover and build skills through various classroom activities. Investigating algebra activities, modeling examples, using real-life application, using note-taking strategies, and using SMARTBoard technologies will all be explored. Other learning experiences could include alternative lesson openers, math and history applications, problem-solving workshops, interdisciplinary applications and extra examples of problem solving. In addition, students will use ALEKS to individualize the lessons.

**Suggested warm-up activities, instructional strategies/activities, and assignments:**

**CHAPTER 3**

**Section 3.1:**

| <b>College Prep</b>                        |   |
|--|---|
| <b>Focus and Motivate Starting Options</b> | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. p. 119 #1-9</li> <li>• Math Background TE p. 119</li> </ul>  |
| <b>Teach Teaching Options</b>              | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 119</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 41</li> <li>• Examples 1–4: PE pp. 120-121</li> <li>• Quick Check Problems 1–4: PE pp. 120-121</li> <li>• Additional Examples TE p. 121</li> <li>• Chapter Resource Book Grab and Go File Chapter 3 p. 1</li> </ul> |
| <b>Checking for Understanding</b>          | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 3-1 p. 278</li> <li>• Guided Practice Exercises: p. p. 122 #1-43</li> <li>• Closing the Lesson: TE Quick Check 1-4 p. 120-121</li> </ul>  |

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|---|--|
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 122 #1-20</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 10</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 19</li> </ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>• A balance scale is a concrete way to help students understand why inverse operations must be applied to both sides of an equation (scales are provided in SMARTBoard gallery) (Chapter 3.1)</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>  |
| <b>Section 3.2:</b>                                       |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 126 #1-10</li> <li>• Math Background TE p. 126</li> </ul>   |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 126</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 43</li> <li>• Examples 1–5: PE pp. 126-128</li> <li>• Quick Check Problems 1–5: PE pp. 126-128</li> <li>• Additional Examples TE p. 128</li> <li>• Chapter Resource Book Grab and Go File Chapter 3 p. 2</li> </ul>  |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 3-2 p. 280</li> <li>• Guided Practice Exercises: p. 129 #1-38</li> <li>• Closing the Lesson: TE Quick Check 1-5 p. 126-128</li> </ul>  |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 129 #2-38 even</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>  |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 11</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 20</li> </ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>• Have pairs of students take turns explaining the steps of this example to each other. Then, have them work together to solve the Check Understanding exercises.</li> <li>• Use counters to remind students how the Distributive Property can simplify solving equations. For examples, in Example 1a, use 2 red counters and 2 red counters for <math>(2c + c)</math> in the equation. Combine the counters to make <math>c((2+1))</math>.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |
| <b>Section 3.3:</b>                                       |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 134 #1-8</li> <li>• Math Background TE p. 134</li> </ul>  |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 134</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 47</li> <li>• Examples 1–4: p. 135-136</li> <li>• Quick Check Problems 1–4: PE p. 135-136</li> <li>• Additional Examples TE p. 136</li> <li>• Chapter Resource Book Grab and Go File Chapter 3 p. 3</li> </ul>   |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 3-3 p. 282</li> <li>• Guided Practice Exercises: p. 136-137 #1-31</li> <li>• Closing the Lesson: TE Quick Check 1-4 p. 135-136</li> </ul>  |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 136-137 #2-30 even</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>  |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 12</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 21</li> </ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>• Have students draw a vertical line down the equal sign every time when solving.</li> <li>• Have students justify each step of solving an equation and explain to another</li> </ul>   |



|   |  |
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|   | <p>student.</p> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>  |
|   |  |
| <b>Section 3.4:</b>                                   |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 142 #1-6</li> <li>• Math Background TE p. 142</li> </ul>  |
| <b>Teach Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 142</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 49</li> <li>• Examples 1–4: p. 142-145</li> <li>• Quick Check Problems 1–4: PE p. 142-145</li> <li>• Additional Examples TE p. 144</li> <li>• Chapter Resource Book Grab and Go File Chapter 3 p. 4</li> </ul> |
| <b>Checking for Understanding</b>                     | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 3-4 p. 284</li> <li>• Guided Practice Exercises: p. 145-147 #1-46</li> <li>• Closing the Lesson: TE Quick Check 1-4 p. 142-145</li> </ul>  |
| <b>Practice and Apply Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p.145-147 #2-36 even</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 13</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 22</li> </ul>  |
| <b>Accommodations/Modifications:</b>                  | <ul style="list-style-type: none"> <li>• Have students create a poster with an example and the steps for solving to help with remembering steps. (Chapter 3.4)</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section.)</i></p>  |
|   |  |
| <b>Section 3.5:</b>                                   |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 149 #1-9</li> <li>• Math Background TE p. 149</li> </ul>  |
| <b>Teach Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 149</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 52</li> <li>• Examples 1–4: p. 149-151</li> <li>• Quick Check Problems 1–4: PE p. 149-151</li> <li>• Additional Examples TE p. 151</li> <li>• Chapter Resource Book Grab and Go File Chapter 3 p. 5</li> </ul> |
| <b>Checking for Understanding</b>                     | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 3-4=5 p. 286</li> <li>• Guided Practice Exercises: p. 152-153 #1-22</li> <li>• Closing the Lesson: TE Quick Check 1-4 p. 149-151</li> </ul>  |
| <b>Practice and Apply Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 152-153 #1-22</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 14</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 23</li> </ul>  |
| <b>Accommodations/Modifications:</b>                  | <ul style="list-style-type: none"> <li>• Have students create a poster with an example and the steps to solving to help with remembering steps. (Chapter 3.4)</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section.)</i></p>   |
|   |  |
| <b>Section 3.6:</b>                                   |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 149 #1-9</li> <li>• Math Background TE p. 149</li> </ul>  |
| <b>Teach Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 149</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 55</li> <li>• Examples 1–4: p. 149-151</li> <li>• Quick Check Problems 1–4: PE p. 149-151</li> <li>• Additional Examples TE p. 151</li> </ul>  |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"> <li>Chapter Resource Book Grab and Go File Chapter 3 p. 5</li> </ul>   |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 3-5 p. 288</li> <li>Guided Practice Exercises: p. 152-153 #1-22</li> <li>Closing the Lesson: TE Quick Check 1-4 p. 149-151</li> </ul>   |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: p. 152-153 #1-22</li> <li>Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>Kuta Software: Pre-Algebra</li> </ul>  |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book Reteaching p. 14</li> <li>ALEKS</li> <li>Kuta Software: Pre-Algebra</li> <li>Enrichment: Chapter Resource Book p. 23</li> </ul>   |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>Provide a resource page that contains tables for students to fill in to help with organization, this will help make the transition from words to equations. (Chapter 3.5)</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>   |
| <b>Section 3.7:</b>                                       |   |
|   | <b>College Prep</b>   |
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>Homework Check (3.6): TE p. 171; Answer Transparencies</li> <li>Daily Homework Quiz (3.6): TE p. 173</li> <li>Warm-Up: TE p. 176 or Transparencies Starting the Lesson Questions: Teaching Guide Motivating the Lesson: TE p. 177</li> </ul>   |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>Essential Question: TE p. 176</li> <li>Alternative Lesson Openers: Electronic Classroom</li> <li>Daily Notetaking Guide All in One Student Workbook p. 59</li> <li>Classroom Activity: Activity Generator</li> <li>Examples 1–5: PE pp. 176–178</li> <li>Extra Examples 1–5 with Key Questions: TE pp. 177–178</li> <li>Interdisciplinary Application: Chapter Resource Book p. 78</li> </ul>                            |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 3-6 p. 290</li> <li>Closing the Lesson: TE p. 178</li> <li>Guided Practice Exercises: PE pp. 176–178</li> </ul>   |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: pp. 179–181 Exs. 1, 2, 3–13 odd, 22, 23, 26–29, 47–52;</li> <li>Day 2: pp. 179–181 Exs. 16, 19–21, 24, 25, 30, 31, 35–39, 41–46</li> <li>Practice Masters: Chapter Resource Book pp. 72–74 (Levels A, B, or C)</li> </ul>  |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book pp. 75–76</li> <li>Tutorial Software</li> <li>Challenge: Chapter Resource Book p. 79</li> </ul>   |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>Have students create an “English-Algebra Dictionary” to help them with the translation. (Chapter 3.7)</li> <li>Have students make a reference sheet for each type of problem. Use a highlighter to identify what type of problem it is. (Chapter 3.7)</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |

## PART IV: EVIDENCE OF LEARNING

IDENTIFY THE METHODS BY WHICH STUDENTS WILL DEMONSTRATE THEIR UNDERSTANDING OF CONTENT AND THEIR ABILITY TO APPLY SKILLS.

IDENTIFY BLOOM’S LEVELS.



### Formative Assessments:

The effectiveness of the instructional program will be based on teacher observations, students doing quality work together, questioning strategies, self and peer assessment, student record-keeping, quizzes, essays, journal writing, performance tasks, diagnostic tests, homework, and projects.

### Accommodations/Modifications:

Use manipulatives to build patterns or represent symbols.  
Provide Graphic organizers to use in solving problems.  
Provide guided notes/handouts.  
Provide visual glossaries, blank number lines for use with positive and negative numbers.  
Break problems into smaller pieces.  
Have students keep and turn in notebook.  
Allow students to use calculator.  
Review needed skills prior to the lesson.  
Provide checklists for solving problems.  
Vocabulary 3A: Graphic Organizer p. 295 All-in-one Student Workbook  
Vocabulary 3B: Reading Comprehension p. 296 All-in-one Student Workbook  
Vocabulary 3C: reading/Writing Math Symbols p. 297 All-in-one Student Workbook  
Vocabulary 3D: Visual Vocabulary Practice p. 298 All-in-one Student Workbook  
Vocabulary 3E: Vocabulary Check p. 299 All-in-one Student Workbook  
Vocabulary 3F: Vocabulary Review p. 301 All –in –one Student Workbook

*(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).*

### **Summative Assessments:**

Periodic benchmark tests, chapter tests, state assessments, PSATs, End of Course tests, and SATs

### **Performance Assessments:**

Projects, display of student work, and electronic portfolios

## PART I: UNIT RATIONALE

### WHY ARE STUDENTS LEARNING THIS CONTENT AND THESE SKILLS?

|   |  |
|---|--|
| <b>Course/Unit Title:</b><br>Algebra 1 – Chapter 4 Solving Graphing Linear Inequalities   | <b>Unit Summary:</b><br>In this unit, students will write, graph and solve one-step and multi-step inequalities using addition, subtraction, multiplication and division. Students will solve and graph compound inequalities using <i>and</i> and <i>or</i> and will solve and graph absolute value equations and inequalities. Students will also graph linear inequalities in two variables.  |
| <b>Grade Level(s):</b><br>9-12  |  |
| <b>Essential Question(s):</b> <ul style="list-style-type: none"> <li>• How do you apply properties of inequality?</li> <li>• How do you use statements with <i>and</i> or <i>or</i>?</li> <li>• How do you graph inequalities?</li> </ul> | <b>Enduring Understanding(s):</b><br>Students will be able to: <ul style="list-style-type: none"> <li>• Solve and graph one-step inequalities using algebra.</li> <li>• Solve and graph two-step inequalities.</li> <li>• Solve and graph multi-step inequalities.</li> <li>• Solve inequalities with variables on both sides of the inequality.</li> <li>• Solve compound inequalities.</li> <li>• Graph linear inequalities in two variables.</li> </ul> |

## PART II: INSTRUCTIONAL STRATEGIES AND RESOURCES

### DESCRIBE THE LEARNING TARGETS.

After each target, identify the NJCCCS or Common Core Standards that are applicable

|  |  |
|--|--|
| <b>Learning Target</b> <ol style="list-style-type: none"> <li>1. Applying properties of inequalities to solve and graph linear inequalities.</li> <li>2. Using <i>and</i> or <i>or</i> to solve compound inequalities.</li> </ol> <p>[Standard] - Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.</p> <ol style="list-style-type: none"> <li>3. Graphing inequalities and absolute value.</li> </ol> <p>[Standard] - Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.</p> | <b>NJCCCS or CCS:</b> <ol style="list-style-type: none"> <li>1. MA.8.8.EE.7M</li> <li>2. MA. CC.9-12.G.GPE.7</li> <li>3. MA. CC.9-12.G.CO.7</li> </ol> |
|--|--|

### Inter-Disciplinary Connections:

#### Real-World problem solving examples:

Finding the possible weights in pound of luggage (p. 358), vehicle weights (p. 361), finding possible amounts of money to spend (p. 371), cell phone plans (p. 378), graph an inequality that relates the number of passengers to the maximum weight capacity of elevators (p. 410)

#### Inter-Disciplinary problem solving examples:

Business and fundraising (p. 373), business and investing (p. 381), science and temperature (p. 386), physical education and possible air pressure values for basketballs (p. 392)

### Students will engage with the following text:

Pearson, Algebra 1, 2009, by Prentice Hall Mathematics Publishing

Larson Algebra 1 2011 by Houghton Mifflin Harcourt Publishing Group (*supplemental*)

### Students will write:

#### Writing/Open Ended questions:

Have students explain the difference between the open dot and the closed dot in graphing inequalities. P. 202; Ask students to compare solving inequalities using addition and subtraction with solving equations using addition and subtraction. P. 208; Have student state the main difference between solving inequalities using multiplication and division and solving equations using multiplication p. 214; Instruct students to write a multi-step inequality with variables on both sides that requires the use of the distributive property. Have students exchange inequalities and solve. P. 221; Ask students to explain in their own words the difference between compound inequalities with and and those with or. P. 229.

## **PART III: TRANSFER OF KNOWLEDGE AND SKILLS**

### **DESCRIBE THE LEARNING EXPERIENCE.**

#### **How will students uncover content and build skills.**

Students will uncover and build skills through various classroom activities. Investigating algebra activities, modeling examples, using real-life application, using note-taking strategies, and using SMARTBoard technologies will all be explored. Other learning experiences could include alternative lesson openers, math and history applications, problem-solving workshops, interdisciplinary applications and extra examples of problem solving. In addition, students will use ALEKS to individualize the lessons.

#### **Suggested warm-up activities, instructional strategies/activities, and assignments:**

### **CHAPTER 4**

#### **Section 4.1:**

|  | <b>College Prep</b>  |
|--|--|
| <b>Focus and Motivate Starting Options</b> | <ul style="list-style-type: none"><li>• Warm-Up (Check Skills You'll Need): TE p. 200 #1-11</li><li>• Math Background TE p. 200</li></ul>  |
| <b>Teach Teaching Options</b>              | <ul style="list-style-type: none"><li>• Essential Question: TE p. 200</li><li>• Classroom Activity: Online Active Math</li><li>• Daily Notetaking Guide All in One Student Workbook p. 67</li><li>• Examples 1–5: p. 200-202</li><li>• Quick Check Problems 1–5: PE p. 200-202</li><li>• Additional Examples TE p. 202</li><li>• Chapter Resource Book Grab and Go File Chapter 4 p. 2</li></ul> |
| <b>Checking for Understanding</b>          | <ul style="list-style-type: none"><li>• Guided Problem Solving All in One Student Workbook 4-1 p. 304</li><li>• Guided Practice Exercises: p. 200-202 #1-32</li><li>• Closing the Lesson: TE Quick Check 1-4 p. 135-136</li></ul>  |

|   |   |
|---|---|
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 202-203 #2-32 even</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 8</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 14</li> </ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>• As a class, make a list of words and phrases that indicate inequality. For each, write a sentence. Then translate the sentence to algebra. Have students review how to read an inequality, reading from left to right and that the inequality symbol always points to the smaller quantity.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |

#### Section 4.2:

|   | College Prep  |
|---|---|
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 206 #1-7</li> <li>• Math Background TE p. 206</li> </ul>   |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 206</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 69</li> <li>• Examples 1–4: p. 206-207</li> <li>• Quick Check Problems 1–4: PE p. 206-207</li> <li>• Additional Examples TE p. 208</li> <li>• Chapter Resource Book Grab and Go File Chapter 4 p. 3</li> </ul>  |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 4-2 p. 306</li> <li>• Guided Practice Exercises: p. 206-207 #1-38</li> <li>• Closing the Lesson: TE Quick Check 1-4 p. p. 206-208</li> </ul>  |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. 136-137 #2-30 even</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 9</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> <li>• Enrichment: Chapter Resource Book p. 15</li> </ul>  |
| <b>Accommodations/Modifications:</b>                      | <ul style="list-style-type: none"> <li>• Use patterns to help students understand why the inequality symbol reverses direction when multiplying or dividing by a negative.</li> <li>• Students may have problems deciding when to use <math>&lt;</math> and when to use <math>&gt;</math>. Explain that students can ask themselves whether the number on the "border" is an acceptable answer.</li> <li>• Provide students with blank number lines to graph the inequalities.</li> <li>• Some students will have difficulty translating directly from the statement of a word problem to an algebraic inequality. Have them rewrite the word problem as a simple statement of inequality. Then they can translate the statement to algebra.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p> |

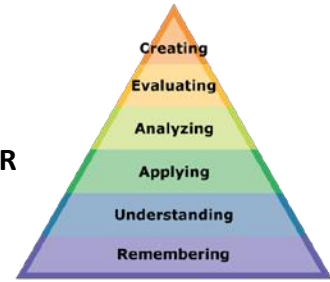
#### Section 4.3:

|   | College Prep   |
|---|--|
| <b>Focus and Motivate<br/>Starting Options</b>            | <ul style="list-style-type: none"> <li>• Warm-Up (Check Skills You'll Need): TE p. 212 #1-8</li> <li>• Math Background TE p. 134</li> </ul>  |
| <b>Teach<br/>Teaching Options</b>                         | <ul style="list-style-type: none"> <li>• Essential Question: TE p. 212</li> <li>• Classroom Activity: Online Active Math</li> <li>• Daily Notetaking Guide All in One Student Workbook p. 71</li> <li>• Examples 1–4: p. 212-214</li> <li>• Quick Check Problems 1–4: PE p. 212-214</li> <li>• Additional Examples TE p. 214</li> <li>• Chapter Resource Book Grab and Go File Chapter 4 p. 4</li> </ul> |
| <b>Checking for Understanding</b>                         | <ul style="list-style-type: none"> <li>• Guided Problem Solving All in One Student Workbook 4-3 p. 308</li> <li>• Guided Practice Exercises: p. 215 #1-50</li> <li>• Closing the Lesson: TE Quick Check 1-4 p. 135-136</li> </ul>  |
| <b>Practice and Apply<br/>Assigning Homework</b>          | <ul style="list-style-type: none"> <li>• Average: Day 1: p. p. 215 #2-50 (even)</li> <li>• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |
| <b>Assess and Reteach<br/>Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>• Study Guide: Chapter Resource Book Reteaching p. 10</li> <li>• ALEKS</li> <li>• Kuta Software: Pre-Algebra</li> </ul>   |

|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>Enrichment: Chapter Resource Book p. 16</li> </ul>  |
| <b>Accommodations/Modifications:</b>                  | <i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>   |
| <b>Section 4.4:</b>                                   |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate Starting Options</b>            | <ul style="list-style-type: none"> <li>Warm-Up (Check Skills You'll Need): TE p. 220 #1-8</li> <li>Math Background TE p. 220</li> </ul>  |
| <b>Teach Teaching Options</b>                         | <ul style="list-style-type: none"> <li>Essential Question: TE p. 220</li> <li>Classroom Activity: Online Active Math</li> <li>Daily Notetaking Guide All in One Student Workbook p. 47</li> <li>Examples 1–5; p. 220 - 221</li> <li>Quick Check Problems 1–5: PE p. 220-221</li> <li>Additional Examples TE p. 221</li> <li>Chapter Resource Book Grab and Go File Chapter 4 p. 5</li> </ul> |
| <b>Checking for Understanding</b>                     | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 4-4 p. 310</li> <li>Guided Practice Exercises: p. 222 #1-40</li> <li>Closing the Lesson: TE Quick Check 1-5 p. 222-223</li> </ul>  |
| <b>Practice and Apply Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: p. 222 #2-40 even</li> <li>Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>Kuta Software: Pre-Algebra</li> </ul>  |
| <b>Assess and Reteach Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book Reteaching p. 11</li> <li>ALEKS</li> <li>Kuta Software: Pre-Algebra</li> <li>Enrichment: Chapter Resource Book p. 17</li> </ul>  |
| <b>Accommodations/Modifications:</b>                  | <ul style="list-style-type: none"> <li>To help students having difficulty visualizing the graphs of compound Inequalities. Have students complete project in resource file.</li> </ul> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>   |
| <b>Section 4.5:</b>                                   |  |
|   | <b>College Prep</b>  |
| <b>Focus and Motivate Starting Options</b>            | <ul style="list-style-type: none"> <li>Warm-Up (Check Skills You'll Need): TE p. 227 #1-7</li> <li>Math Background TE p. 227</li> </ul>  |
| <b>Teach Teaching Options</b>                         | <ul style="list-style-type: none"> <li>Essential Question: TE p. 227</li> <li>Classroom Activity: Online Active Math</li> <li>Daily Notetaking Guide All in One Student Workbook p. 76</li> <li>Examples 1–5: p. 227-229</li> <li>Quick Check Problems 1–5: PE p. 227-229</li> <li>Additional Examples TE p. 229</li> <li>Chapter Resource Book Grab and Go File Chapter 4 p. 6</li> </ul>   |
| <b>Checking for Understanding</b>                     | <ul style="list-style-type: none"> <li>Guided Problem Solving All in One Student Workbook 4-5 p. 312</li> <li>Guided Practice Exercises: p. 228-229 #1-38</li> <li>Closing the Lesson: TE Quick Check 1-5 p. 227-229</li> </ul>  |
| <b>Practice and Apply Assigning Homework</b>          | <ul style="list-style-type: none"> <li>Average: Day 1: p. 229-230 #2-32 even</li> <li>Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)</li> <li>Kuta Software: Pre-Algebra</li> </ul>  |
| <b>Assess and Reteach Differentiating Instruction</b> | <ul style="list-style-type: none"> <li>Study Guide: Chapter Resource Book Reteaching p. 12</li> <li>ALEKS</li> <li>Kuta Software: Pre-Algebra</li> <li>Enrichment: Chapter Resource Book p. 18</li> </ul>  |
| <b>Accommodations/Modifications:</b>                  | <i>Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>  |

## PART IV: EVIDENCE OF LEARNING

IDENTIFY THE METHODS BY WHICH STUDENTS WILL DEMONSTRATE THEIR UNDERSTANDING OF CONTENT AND THEIR ABILITY TO APPLY SKILLS.  
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Provide Graphic organizers to use in solving problems.  
Provide guided notes/handouts.  
Provide visual glossaries, blank number lines for use with positive and negative numbers.  
Break problems into smaller pieces.  
Have students keep and turn in a notebook.  
Allow students to use calculator.  
Review needed skills prior to the lesson.  
Provide checklists for solving problems.  
Vocabulary 4A: Graphic Organizer p. 315 All-in-one Student Workbook  
Vocabulary 4B: Reading Comprehension p. 316 All-in-one Student Workbook  
Vocabulary 4C: reading/Writing Math Symbols p. 317 All-in-one Student Workbook  
Vocabulary 4D: Visual Vocabulary Practice p. 318 All-in-one Student Workbook  
Vocabulary 4E: Vocabulary Check p. 319 All-in-one Student Workbook  
Vocabulary 4F: Vocabulary Review p. 321 All –in –one Student Workbook

*(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).*

### Summative Assessments:

Periodic benchmark tests, chapter tests, state assessments, PSATs, End of Course tests, and SATs

### Performance Assessments:

Projects, display of student work, and electronic portfolios