

MATH II – COURSE OF STUDY AND SYLLABUS

2015-2016 Academic School-Year

1st Marking Period

Review of: Chapter 3 - Solving Linear Equations

- 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*)
- 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*)

Review of: Chapter 4 - Solving and Graphing Linear Inequalities

- 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*)
- 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*)

Chapter 5: Graphs and Functions (5.1 – 5.4)

- 5.1 Relating graphs to Events - (*CC.9-12.F.IF.B.5, CC.9-12.F.IF.C.7a; MA.9-12.F-LE.A.1*)
- 5.2 Relations and Functions - (*CC.9-12.A.CED.2, CC.9-12.A.CED. 3, CC.9-12.A.REI.10, CC.9-12.F.IF.B.5*)
- 5.3 Functions Rules, Tables, and Graphs - (*CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.B.4, CC.9-12.F.IF.B.5, CC.9-12.F.IF.C.7a, MA.9-12.F-LE.A.1*)
- 5.4. Writing a Function Rule - (*CC.9-12.F.IF.B.4, CC.9-12.F.IF.B.6, CC.9-12.IF.C.7*)

2nd Marking Period

Chapter 5: Graphs and Functions (5.5 – 5.7)

5.5 Direct Variation - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.B.6, CC.9-12.F.IF.C.7a)

5.6 Inverse Variation - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.B.6, CC.9-12.F.IF.C.7a)

5.7 Describing Number Patterns - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.A.1, CC.9-12.F.IF.A.2, CC.9-12.F.IF.B.5, CC.9-12.F.IF.C.7a, CC.9-12.F.BF.B.3)

Chapter 6: Linear Equations and Their Graphs (6.1 – 6.3)

6.1 Rate of Change and Slope - (CC.9-12.F.IF.B.4, CC.9-12.F.IF.B.6, CC.9-12.S.ID.C.7)

6.2 Slope Intercept Form - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.B.5, CC.9-12.F.IF.C.7a)

6.3 Applying Linear Functions - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.B.4, CC.9-12.F.IF.B.6, CC.9-12.F.BF.A.1a, CC.9-12.F.LE.A.2, CC.9-12.F.LE.B.5, CC.9-12.S.ID.C.7)

Chapter 6: Linear Equations and Their Graphs (6.4 – 6.6)

6.4. Standard Form - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.B.4, CC.9-12.F.IF.B.5, CC.9-12.F.LE.A.2)

6.5 Point Slope Form and Writing Linear Equations - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.F.IF.B.4, CC.9-12.F.IF.B.6, CC.9-12.F.IF.C.7a, CC.9-12.F.BF.A.1a, CC.9-12.F.LE.A.2, CC.9-12.F.LE.B.5, CC.9-12.S.ID.C.7)

6.6 Parallel and Perpendicular Lines - (CC.9-12.9-12.F.LE.A.2, CC.9-12.G.GPE.B.5)

3rd Marking Period

Chapter 7: Systems of Equations and Inequalities (7.1 – 7.4)

7.1 Solving Systems by Graphing - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.A.REI.C.6)

7.2 Solving Systems using Substitution - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.A.REI.C.5, CC.9-12.A.REI.C.6)

7.3 Solving Systems using Elimination - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.A.REI.C.5, CC.9-12.A.REI.C.6)

7.4. Applications of Linear Systems - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.A.REI.C.5, CC.9-12.A.REI.C.6)

Chapter 7: Systems of Equations and Inequalities and *Section 6.8 (6.8, 7.5 – 7.6)

****6.8. Solving and Graphing Absolute Value Equations - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.A.REI.C.5, CC.9-12.A.REI.C.6)**

7.5 Linear Inequalities - (CC.9-12.A.CED.A.3, CC.9-12.A.REI.D.12)

7.6 Systems of Linear Inequalities - (CC.9-12.A.CED.A.2, CC.9-12.A.CED.A.3, CC.9-12.A.REI.D.12)

4th Marking Period

Chapter 8 – Exponential Functions

8.1 Zero and Negative Exponents (CC.9-12.A.SSE.B.3c, CC.9-12.N.RNA.1)

8.2 Scientific Notation (CC.8.8.EE.A.4)

8.3 Multiplication Properties of Exponents (CC.8.8.EE.A.1)

8.4 More Multiplication Properties of Exponents (CC.8.8.EE.A.1)

8.5 Division Properties of Exponents (CC.8.8.EE.A.1)

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 21ST CENTURY GLOBAL SKILLS

MATH FOUNDATIONS II

PART I: UNIT RATIONALE

WHY ARE STUDENTS LEARNING THIS CONTENT AND THESE SKILLS?

<p>Course/Unit Title: Algebra 1 – Chapter 5 Graphs and Functions</p> <hr/> <p>Grade Level(s): 9-12</p>	<p>Unit Summary: In this unit you will graph linear equations and functions. By the end of the unit, you will be able to use slopes and y-intercepts to compare graphs of families of linear functions.</p>
<p>Essential Question(s):</p> <ul style="list-style-type: none"> • How do you graph linear equations and functions? • How do changes in a linear equation or function affect their graph? • How do you use graphs of linear equations and functions to solve real-world problems? 	<p>Enduring Understanding(s): Students will be able to:</p> <ul style="list-style-type: none"> • Identify and plot points in a coordinate plane • Graph linear equations in a coordinate plane • Graph linear equations using intercepts • Find the slope of a line and interpret slope as a rate of change • Graph linear equations using slope-intercept form • Write and graph direct variation equations • Use function notation

PART II: INSTRUCTIONAL STRATEGIES AND RESOURCES

DESCRIBE THE LEARNING TARGETS.

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

<p>Learning Target</p> <p>1. Graph linear equations and functions [Standard] - Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. [Standard] - Graph linear and quadratic functions and show intercepts, maxima, and minima. [Standard] - Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. [Standard] - Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. [Standard] - Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).</p> <p>2. Recognizing changes in linear equations and functions and how it affects their graphs <i>[Standard] - For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.</i> <i>[Standard] - Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.</i> [Standard] - Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.</p> <p>3. Use graphs of linear equations and functions to solve real world problems [Standard] - Distinguish between situations that can be modeled with linear functions and with exponential functions.</p>	<p>NJCCCS or CCS:</p> <ol style="list-style-type: none"> 1. <i>MA.9-12.F-IF.B.5, C7a, A-CED.2,3 A-REI.10</i> 2. <i>MA.9-12.F-IF.B.4, 6F-BF.3</i> 3. <i>MA.9-12.F-LE.A.1</i>
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Inter-Disciplinary Connections:

Real-World problem solving examples:

Comparing votes casted using a graph of a function (p 208), Find the distance a runner travels using a graph of a function(p 218), Find the domain and range of a function that represents the time it takes for a submarine to surface(p 228), Describe a student's commute to school from a graph using rate of change(p 238), Compare the costs of 2 television commercials using a graph (p 246), Represent the cost of downloading songs using a direct variation (p 256), Compare the cable company's discount to its original cost using functions (p 265)

Inter-Disciplinary problem solving examples:

Astronaut Photography (p 210), Weather Data (p 221), Recycling (p 230), Oceanography (p 241), Speed Limits (p 249), Vacation Time (p 258), Movie Tickets (p 267)

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 5-1 - Ask the students to draw a graph representing their commutes to and from school p. 253.

Chapter 5-2 - Have students explain the difference between a relation and a function. P. 259.

Chapter 5-3 - Have students brainstorm advantages and disadvantages of representing functions and using rules, tables and graphs. P. 265.

Chapter 5-4 - Ask students: What question can you ask yourself when using a table to write a function rule? P. 272.

Chapter 5-6 - Have students state the form of a direct variation rule. Ask what K represents? P. 280.

Chapter 5-7 -Ask students to describe how a direct variation and an inverse variation are different. P. 287.

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 5

Section 5.1:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 252 #1-7 • Math Background TE p. 252 • Vocabulary Introduction
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 252 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 81 • Examples 1–3: p. 252-253 • Additional Examples TE p. 523 • Chapter Resource Book Grab and Go File Chapter 5 p. 1
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 5-1 p. 324 • Guided Practice 254-255 Exercises: #1-12 • Closing the Lesson: TE Quick Check Problems 1-3 p. 252-253
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 254 #1-12 Expressions • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 8 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 15
Accommodations/Modifications:	<ul style="list-style-type: none"> • Provide students with a kinesthetic graphing experience to help them understand how to graph points. • Have students write out the equation with the value substituted in. <p><i>(Reference materials are located in District shared directory, mathematics, modifications /accommodations folder, by chapter and section).</i></p>

Section 5.2:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Vocabulary Review • Warm-Up (Check Skills You'll Need): TE p. 257 #1-7 • Math Background TE p. 257
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 257 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 83 • Examples 1–2: p. 257-258 • Quick Check Problems 1–2 p. 257-258 • Additional Examples TE p. 259 • Chapter Resource Book Grab and Go File Chapter 5 p. 2
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 5-2 p. 326 • Guided Practice Exercises: p. 259-260 • Closing the Lesson: TE Quick Check 1-2
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 259 #1-19 • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 9 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 16
Accommodations/Modifications:	<ul style="list-style-type: none"> • Have students organize their work in a table. • Provide students with a list of values to use for consistency.

	<i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>
Section 5.3:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Introduce Vocabulary • Warm-Up (Check Skills You'll Need): TE p. p. 263 #1-2 • Math Background TE p. 263
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 263 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 86 • Examples 1–2: p. 263-264 • Additional Examples TE p. 264-265 • Quick Check Problems 1–2 p. 263-264 • Chapter Resource Book Grab and Go File Chapter 5 p. 3
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 5-3 p.328 • Guided Practice Exercises: p. 266 #1-23 • Closing the Lesson: Quick Check Problems 1–4 p. 18-20
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 266 #2-22 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 10 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 17
Accommodations/Modifications:	<ul style="list-style-type: none"> • Provide students with a table of values and relate the table to points on a graph <i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>
Section 5.4:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Introduce Vocabulary • Warm-Up (Check Skills You'll Need): TE p. 270 #1-9 • Math Background TE p. 270
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 270 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 88 • Examples 1–3: p. 270-271 • Additional Examples TE p. 271 • Chapter Resource Book Grab and Go File Chapter 5 p. 4
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 5-4 p. 330 • Guided Practice Exercises: p. 272 • Closing the Lesson: Quick Check Problems 1–3 p. 270-271
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 272 #1-16 • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 11 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 18
Accommodations/Modifications:	<ul style="list-style-type: none"> • Encourage students to copy ordered pairs to their own paper before calculating the slope. <i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>
Section 5.5:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Introduce Vocabulary • Warm-Up (Check Skills You'll Need): TE p. 277 #1-6 • Math Background TE p. 277
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 277 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 90 • Examples 1–3: p. 277-278 • Additional Examples TE p. 279 • Chapter Resource Book Grab and Go File Chapter 5 p. 5

Checking for Understanding	<ul style="list-style-type: none"> Guided Problem Solving All in One Student Workbook 5-5 p. 332 Guided Practice Exercises: p. 280-281 Closing the Lesson: Quick Check Problems 1–3 p. 277-278
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> Average: Day 1: p. 280-281 #2-26 even Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 12 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 19
Accommodations/Modifications:	<ul style="list-style-type: none"> Have students create a graphic organizer or concept map to help them see the relationships between the different methods for graphing a linear equation. <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>
Section 5.6:	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> Introduce Vocabulary Warm-Up (Check Skills You'll Need): TE p. 284 #1-8 Math Background TE p. 284
Teach Teaching Options	<ul style="list-style-type: none"> Essential Question: TE p. 284 Classroom Activity: Online Active Math Daily Notetaking Guide All in One Student Workbook p. 93 Examples 1–3: p. 285-286 Additional Examples TE p. 287 Chapter Resource Book Grab and Go File Chapter 5 p. 6
Checking for Understanding	<ul style="list-style-type: none"> Guided Problem Solving All in One Student Workbook 5-6 p. 334 Guided Practice Exercises: p. 288 Closing the Lesson: Quick Check Problems 1–3 p. 285-286
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> Average: Day 1: p. 288 #2-20 even Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 13 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 19
Accommodations/Modifications:	<ul style="list-style-type: none"> Have students match the vocabulary words presented so far in the lesson with their definitions. <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>
Section 5.7:	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> Introduce Vocabulary Warm-Up (Check Skills You'll Need): TE p. 292 #1-6 Math Background TE p. 292
Teach Teaching Options	<ul style="list-style-type: none"> Essential Question: TE p. 292 Classroom Activity: Online Active Math Daily Notetaking Guide All in One Student Workbook p. 96 Examples 1–2: p. 292-293 Additional Examples TE p. 293 Chapter Resource Book Grab and Go File Chapter 5 p. 7
Checking for Understanding	<ul style="list-style-type: none"> Guided Problem Solving All in One Student Workbook 5-7 p. 336 Guided Practice Exercises: p. 292-293 Closing the Lesson: Quick Check Problems 1–2 p. 292-293
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> Average: Day 1: p. 294 #2-42 even Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 14 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 21
Accommodations/Modifications:	<ul style="list-style-type: none"> Show students a function machine, this will help students understand the difference between domain and range. <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 5A: Graphic Organizer p. 337 All-in-one Student Workbook
Vocabulary 5B: Reading Comprehension p. 338 All-in-one Student Workbook
Vocabulary 5C: Reading/Writing Math Symbols p. 339 All-in-one Student Workbook
Vocabulary 5D: Visual Vocabulary Practice p. 340 All-in-one Student Workbook
Vocabulary 5E: Vocabulary Check p. 341 All-in-one Student Workbook
Vocabulary 5F: Vocabulary Review p. 343 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>Course/Unit Title: Algebra 1 – Chapter 6 Linear Equations and Their Graphs</p> <p>Grade Level(s): 9-12</p>	<p>Unit Summary: In this unit, you will use equations to study real-world situations. By the end of this unit, you will be able to write linear equations, including those that model real-world data</p>
<p>Essential Question(s):</p> <ul style="list-style-type: none"> • How can you write linear equations in different forms? • How can you use linear models to solve problems? • How can you model data with a line of best fit? 	<p>Enduring Understanding(s): Students will be able to:</p> <ul style="list-style-type: none"> • Write equations of lines • Write an equation of a line using points on the line • Write linear equations in point-slope form • Write linear equations in standard form. • Write equations of parallel and perpendicular lines • Make scatter plots and write equations to model data

PART II: INSTRUCTIONAL STRATEGIES AND RESOURCES

DESCRIBE THE LEARNING TARGETS.

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

<p>Learning Target</p>	<p>NJCCCS or CCS:</p>
<p>1. Write linear equations in different forms <i>[Standard]</i></p> <ol style="list-style-type: none"> 1. Write a function that describes a relationship between two quantities <ol style="list-style-type: none"> a. Determine an explicit expression, a recursive process, or steps for calculation from a context. 2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). 3. Interpret the parameters in a linear or exponential function in terms of a context. 4. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. 5. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. <i>For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.</i> 6. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.</i>★ 7. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. <i>For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.</i>★ 8. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.★ 9. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.★ <ol style="list-style-type: none"> a. Graph linear and quadratic functions and show intercepts, maxima, and minima. 10. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. <p>2. Use linear models to solve problems <i>[Standard]</i></p> <ol style="list-style-type: none"> 1. Write a function that describes a relationship between two quantities.★ <ol style="list-style-type: none"> a. Determine an explicit expression, a recursive process, or steps for calculation from a context. 2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). 3. Interpret the parameters in a linear or exponential function in terms of a context. 4. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. 5. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. <i>For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.</i> 6. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description 	<ol style="list-style-type: none"> 1. CC.9-12.F.BF.1a; CC.9-12.F.IE.2, 5; CC.12.A.CED.2-3; CC.9-12.F.IF.4-7a; CC.9-12.S.ID.7 2. CC.9-12.F.BF.1a; CC.9-12.F.IE.2, 5; CC.9-12.A.CED.2-3; CC.9-12.F.IF.4-7a

of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.*★

7. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.*★

8. Calculate and interpret the average rate of change of a function (presented symbolically or as a table over a specified interval. Estimate the rate of change from a graph.★

9. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.★

a. Graph linear and quadratic functions and show intercepts, maxima, and minima.

10. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

Inter-Disciplinary Connections:

Real-World problem solving examples:

Studio costs per hour (p.285), gym membership costs (p. 294), BMX racing costs (p. 295), cost of stickers (p. 304), transportation possibilities (p. 313), state flag design (p. 320), linear models of bird populations (p. 326),

Inter-Disciplinary problem solving examples:

Distances in sports (p. 289), total cost (p.295), sports statistics (p. 308), possible combinations of objects (p. 315), analyze growth rates (p. 322), modeling scientific data (p. 329)

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 6-1 - What are two ways to find the slope of a line? P. 311.

Chapter 6-2 - How does changing the value of m affect the graph of a line? How does changing the value of b affect the graph of a line? P. 319.

Chapter 6-3 - Have students work in pairs to list facts that they can find out about a real-world situation from reading a graph that models that situation. P. 326.

Chapter 6-4 - Ask: How do you find the x and y intercepts of a linear equation? P. 332.

Chapter 6-5 - Ask students to write a set of data that is linear, and then model the data with an equation. Have them graph the data and the equation. P. 338.

Chapter 6-6 - Ask: Compare the equations of non-vertical and parallel lines. Compare the equations of perpendicular lines. P. 345.

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 6

Section 6.1:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Introduce Vocabulary • Warm-Up (Check Skills You'll Need): TE p. 308 #1-10 • Math Background TE p. 308
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 308 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 98 • Examples 1–5: p. 309-311 • Quick Check Problems 1–5 p. 309-311 • Additional Examples TE p. 311 • Chapter Resource Book Grab and Go File Chapter 6 p. 2
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 6-1 p. 346 • Guided Practice Exercises: p. 312-313 #1-26 • Closing the Lesson: TE Quick Check 1-5
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 312-313 #2-28 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 10 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 18
Accommodations/Modifications:	<ul style="list-style-type: none"> • Students will benefit from having a step-by-step template that shows how to write the equation of a line. <i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>

Section 6.2:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 317 #1-6 • Math Background TE p. 317
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 317 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 101 • Examples 1–6: PE p. 317-319 • Quick Check Problems 1–5 p. 317-318 • Additional Examples TE p. 319 • Chapter Resource Book Grab and Go File Chapter 6 p. 3
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 6-2 p. 348 • Guided Practice Exercises: p. 320 #1-62 • Closing the Lesson: TE Quick Check 1-5
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 320 #2-32 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 11 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 19
Accommodations/Modifications:	<ul style="list-style-type: none"> • Using the template, students will see the connection with the new problems <i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>

Section 6.3:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 324 #1-7 • Math Background TE p. 324
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 324 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 104 • Examples 1–2: p. 324-325 • Quick Check Problems 1–2 p. 324-325 • Additional Examples TE p. 325 • Chapter Resource Book Grab and Go File Chapter 6 p. 4
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 6-3 p. 350 • Guided Practice Exercises: p. 325-326 #1-10 • Closing the Lesson: TE Quick Check 1-2
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 325-326 #1-10 • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 12 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 20
Accommodations/Modifications:	<ul style="list-style-type: none"> • Make handouts of the word problems, so students can highlight or underline the information as they read. <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>
Section 6.4:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 330 #1-9 • Math Background TE p. 330
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 330 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 106 • Examples 1–4: p. 331-332 • Quick Check Problems 1–4 p. 331-332 • Additional Examples TE p. 332 • Chapter Resource Book Grab and Go File Chapter 6 p. 5
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 6-4 p. 352 • Guided Practice Exercises: p. 331-332 #1-35 • Closing the Lesson: TE Quick Check 1-7
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 331-332 #1-35 • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 13 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 21
Accommodations/Modifications:	<ul style="list-style-type: none"> • Focus on vocabulary for the word "equivalent." • Make a poster for the wall that displays the name, the general equation, and an example for each form of linear equations. <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i></p>
Section 6.5:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 336 #1-6 • Math Background TE p. 336
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 336 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 109 • Examples 1–6: 336-338 • Quick Check Problems 1–6: 336-338 • Additional Examples TE p. 338 • Chapter Resource Book Grab and Go File Chapter 6 p. 6

Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 6-5 p. 354 • Guided Practice Exercises: p. 339 #1-53 • Closing the Lesson: TE Quick Check 1-3
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 339 #2-52 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 14 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 22
Accommodations/Modifications:	<ul style="list-style-type: none"> • Create a table to organize the equation of the original line vs. the equation of the line parallel. <i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>
Section 6.6:	
College Prep	
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Vocabulary Introduction • Warm-Up (Check Skills You'll Need): TE p. 343 #1-8 • Math Background TE p. 343
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 343 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 112 • Examples 1–3: p. 343-344 • Quick Check Problems 1–3 p. 343-344 • Additional Examples TE p. 345 • Chapter Resource Book Grab and Go File Chapter 6 p. 7
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 6-6 p. 356 • Guided Practice Exercises: p. 346-347 #1-46 • Closing the Lesson: TE Quick Check 1-3
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: 346-347 #2-26 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 15 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 23
Accommodations/Modifications:	<ul style="list-style-type: none"> • Create a table to organize the equation of the original line vs. the equation of the line perpendicular. <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. 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 6A: Graphic Organizer p. 360 All-in-one Student Workbook
Vocabulary 6B: Reading Comprehension p. 361 All-in-one Student Workbook
Vocabulary 6C: reading/Writing Math Symbols p. 362 All-in-one Student Workbook
Vocabulary 6D: Visual Vocabulary Practice p. 363 All-in-one Student Workbook
Vocabulary 6E: Vocabulary Check p. 364 All-in-one Student Workbook
Vocabulary 6F: Vocabulary Review p. 367 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>Course/Unit Title: Algebra 1 – Chapter 7 Systems of Equations and Inequalities</p> <hr/> <p>Grade Level(s): 9-12</p>	<p>Unit Summary: 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.</p>
<p>Essential Question(s):</p> <ul style="list-style-type: none"> • How do I solve a linear system using graphing? • How do I solve a linear system using algebra? • How do I solve a system of linear inequalities? 	<p>Enduring Understanding(s): Students will be able to:</p> <ul style="list-style-type: none"> • Graph and solve systems of linear equations • Solve systems of linear equations by substitution • Solve systems of linear equations by elimination (addition) • Solve linear systems by multiplying first • Identify the number of solutions of a linear system • Solve systems of linear inequalities in two variables

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>
<p>1. Solve systems of linear equations by graphing [Standard] - Solve SYSTEMs of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. [Standard] - Solve a simple SYSTEM consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. [Standard] - Graph linear and quadratic functions and show intercepts, maxima, and minima.</p> <p>3. Solve systems of equations using algebra [Standard] - Solve SYSTEMs of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. [Standard] - Solve a simple SYSTEM consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.</p> <p>4. Solve systems of linear inequalities [Standard] - Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a SYSTEM of linear INEQUALITIES in two variables as the intersection of the corresponding half-planes. Standard] - Represent constraints by equations or INEQUALITIES, and by SYSTEMs of equations and/or INEQUALITIES, and interpret solutions as viable or non-viable options in a modeling context.</p>	<p>1. MA.9-12.A-REI.6,7; F-IF.7.a 2. MA.9-12.A-REI.6,7 3. MA.9-12.A-REI.12; MA.9-12.A-CED.3</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 7-1 - Ask students to write three systems of equations: a system with one solution, a system with no solution, and a system with infinitely many solutions. P. 376.

Chapter 7-2 - Ask: Why it is sometimes easier to solve equations using substitution rather than graphing? P. 383.

Chapter 7-3 - Ask students to explain when it is best to solve a system by using elimination, and when it is best to use substitution. P. 390.

Chapter 7-4 - Ask students to tell what they found most difficult about writing a system of equations to solve a word problem. 398.

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 7

Section 7.1:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none">• Warm-Up (Check Skills You'll Need): TE p. 374 #1-7• Math Background TE p. 374
Teach Teaching Options	<ul style="list-style-type: none">• Essential Question: TE p. 374• Classroom Activity: Online Active Math• Daily Notetaking Guide All in One Student Workbook p. 119• Examples 1–5: p. 374-376• Quick Check Problems 1–5 p. 374-375• Additional Examples TE p. 375• Chapter Resource Book Grab and Go File Chapter 7 p. 2
Checking for Understanding	<ul style="list-style-type: none">• Guided Problem Solving All in One Student Workbook 7-1 p. 370• Guided Practice Exercises: p. 377 #1-22• Closing the Lesson: TE Quick Check 1-5
Practice and Apply	<ul style="list-style-type: none">• Average: Day 1: p. 377 #1-22• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice,

Assigning Homework	<ul style="list-style-type: none"> Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 1 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 14
Accommodations/Modifications:	<ul style="list-style-type: none"> Provide graphs with the problems directly on the graph, leaving room to work. (Chapter 7-1) <p>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</p>

Section 7.2:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> Warm-Up (Check Skills You'll Need): TE p. 382 #1-9 Math Background TE p. 382
Teach Teaching Options	<ul style="list-style-type: none"> Essential Question: TE p. 382 Classroom Activity: Online Active Math Daily Notetaking Guide All in One Student Workbook p. 122 Examples 1–3: p. 382-383 Quick Check Problems 1–3 p. 382-383 Additional Examples TE p. 383 Chapter Resource Book Grab and Go File Chapter 7 p. 3
Checking for Understanding	<ul style="list-style-type: none"> Guided Problem Solving All in One Student Workbook 7-2 p. 372 Guided Practice Exercises: p. 384-385 #1-31 Closing the Lesson: TE Quick Check 1-3
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> Average: Day 1: p. 384-385 #2-30 even Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 9 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 15
Accommodations/Modifications:	<ul style="list-style-type: none"> Have students create a problem-solving plan, listing in order the steps they will take to solve the system. (Chapter 7-2) <p>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</p>

Section 7.3:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> Warm-Up (Check Skills You'll Need): TE p. 387 #1-9 Math Background TE p. 387
Teach Teaching Options	<ul style="list-style-type: none"> Essential Question: TE p. 387 Classroom Activity: Online Active Math Daily Notetaking Guide All in One Student Workbook p. 124 Examples 1–5: p. 387-390 Quick Check Problems 1–5 p. 387-390 Additional Examples TE p. 388 Chapter Resource Book Grab and Go File Chapter 7 p. 4
Checking for Understanding	<ul style="list-style-type: none"> Guided Problem Solving All in One Student Workbook 7-3 p. 374 Guided Practice Exercises: p. 390-391 #1-28 Closing the Lesson: TE Quick Check 1-5
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> Average: Day 1: p. 390-391 #2-28 even Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 10 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 16
Accommodations/Modifications:	<ul style="list-style-type: none"> Set up distance, rate, and time problems in a table. Provide table for students to use. (Chapter 7-3) Have students use tiles or paper squares to practice adding and subtracting equations. (Chapter 7-3)

	<i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</i>
Section 7.4:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 396 #1-9 • Math Background TE p. 396
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 396 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 127 • Examples 1–3: p. 396-398 • Quick Check Problems 1–3 p. 396-398 • Additional Examples TE p. 398 • Chapter Resource Book Grab and Go File Chapter 7 p. 5
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 7-4 p. 376 • Guided Practice Exercises: p. 399-400 #1-9 • Closing the Lesson: TE Quick Check 1-3
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 399-400 #1-9 • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 11 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 17
Accommodations/Modifications:	<ul style="list-style-type: none"> • Have students draft a set of guidelines for choosing the most appropriate strategy (graphing, substitution, elimination) for solving a system of linear equations. Include an example strategy. <i>(Chapter 7-4)</i> • Have students make a list of multiples of the coefficients of each variable. <i>(Chapter 7-4)</i> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section.)</i></p>
Section 7.5:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 404 #1-6 • Math Background TE p. 404
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 404 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 130 • Examples 1–3: p. 405-406 • Quick Check Problems 1–3 p. 405-406 • Additional Examples TE p. 406 • Chapter Resource Book Grab and Go File Chapter 7 p. 6
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 7-5 p. 378 • Guided Practice Exercises: p. 407#1-24 • Closing the Lesson: TE Quick Check 1-3
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 407 #2-24 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 12 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 18
Accommodations/Modifications:	<ul style="list-style-type: none"> • Use a graphic organizer to help visual learners organize the information. <i>(Chapter 7-5)</i> <p><i>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section.)</i></p>
Section 7.6:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 411 #1-6 • Math Background TE p. 411
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 411 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 132

	<ul style="list-style-type: none"> • Examples 1–3: . 411-4 1 • Quick Check Problems 1–3 p. 411-412 • Additional Examples TE p. 413 • Chapter Resource Book Grab and Go File Chapter 7 p. 7
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 7-6 p. 380 • Guided Practice Exercises: p. 414-415 #1-21 • Closing the Lesson: TE Quick Check 1-3
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: 414-415 #2-20 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 13 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 19
Accommodations/Modifications:	<ul style="list-style-type: none"> • Have students provide a verbal understanding of the solution set after showing them the graph. (<i>Chapter 7-6</i>) • Have students create a list of steps in their notebook to keep organized. (<i>Chapter 7-6</i>) <p>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</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 7A: Graphic Organizer p. 381 All-in-one Student Workbook
Vocabulary 7B: Reading Comprehension p. 382 All-in-one Student Workbook
Vocabulary 7C: reading/Writing Math Symbols p. 383 All-in-one Student Workbook
Vocabulary 7D: Visual Vocabulary Practice p. 384 All-in-one Student Workbook
Vocabulary 7E: Vocabulary Check p. 385 All-in-one Student Workbook
Vocabulary 7F: Vocabulary Review p. 387 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?

<p>Course/Unit Title: Algebra 1 – Chapter 8 Exponents and Exponential Functions</p> <hr/> <p>Grade Level(s): 9-12</p>	<p>Unit Summary:</p> <p>In this unit, students will extend their knowledge about exponents to include zero and negative exponents. Students will learn the properties of exponents, and how exponents are used to write a geometric sequence.</p>
<p>Essential Question(s):</p> <ul style="list-style-type: none"> • How do you use scientific notation? • How do you apply properties of exponents? 	<p>Enduring Understanding(s): Students will be able to:</p> <ul style="list-style-type: none"> • Simplify expressions with zero and negative exponents. • To evaluate exponential expressions. • To write numbers in scientific and standard notation. • To use scientific notation. • To multiply powers; raise a power to a power; raise a product to a power • To divide powers with the same base; to raise a quotient to a power.

PART II: INSTRUCTIONAL STRATEGIES AND RESOURCES

DESCRIBE THE LEARNING TARGETS.

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

Learning Target	NJCCCS or CCS
<p>1. Apply properties of exponents to simplify expressions <i>[Standard]</i> CC.8.EE.1 1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. <i>For example, $32 \times 3^{-5} = 3^{-3} = 1/33 = 1/27$.</i></p> <p>CC.9-12.A.SSE 2. Interpret expressions that represent a quantity in terms of its context.★ a. Interpret parts of an expression, such as terms, factors, and coefficients. 3.. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.★ c. Use the properties of exponents to transform expressions for exponential functions. <i>For example the expression $1.15t$ can be rewritten as $(1.151/12)^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.</i></p> <p>CC.9-12.A.APR 1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.</p>	<p>1. CC.8.EE.1; CC.9-12.A.SSE.3c; CC.9-12.A.SSE.1a; CC.9-12.A.APR.1</p>
<p>2. Work with numbers in scientific notation <i>[Standard]</i> CC.8.EE 3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. <i>For example, estimate the population of the United States as 3×10^8 and the population of the world as 7×10^9, and determine that the world population is more than 20 times larger.</i> 4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.</p>	<p>2. CC.8.EE.3-4</p>

Inter-Disciplinary Connections:

Real-World problem solving examples:

Bee Population (p. 491), Sun luminosity (p. 498), Order of magnitude Moth Larva (p. 505), Blood flow (p. 514)

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 8-1 – Ask students to explain the meaning of a zero exponent and the meaning of a negative exponent. (p. 432); Ask what the first step is for simplifying an exponential expression that contains negative exponents (p. 432)

Chapter 8-2 - Explaining when and how to use the product of powers property (p. 492).

Chapter 8-3 - Explain when and how to use the quotients of powers property (p. 498).

Chapter 8-4 - Explain why a zero base with a negative exponent is undefined (p. 506).

Chapter 8-5 - Explaining an estimation for scientific notation (p. 515).

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:

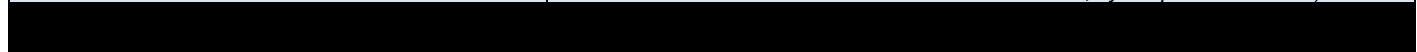
CHAPTER 8

Section 8.1:

	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none">• Warm-Up (Check Skills You'll Need): TE p. 437 #1-7• Math Background TE p. 437
Teach Teaching Options	<ul style="list-style-type: none">• Essential Question: TE p. 437• Classroom Activity: Online Active Math• Daily Notetaking Guide All in One Student Workbook p. 135• Examples 1–4: p. 436-437• Quick Check Problems 1–4 p. 436-437• Additional Examples TE p. 437• Chapter Resource Book Grab and Go File Chapter 8 p. 2
Checking for Understanding	<ul style="list-style-type: none">• Guided Problem Solving All in One Student Workbook 8-1 p. 390• Guided Practice Exercises: p. 438-439 #1-40• Closing the Lesson: TE Quick Check 1-4
Practice and Apply Assigning Homework	<ul style="list-style-type: none">• Average: Day 1: p. 438-439 #2-40 (even)• Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment)• Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none">• Study Guide: Chapter Resource Book Reteaching p. 10• ALEKS• Kuta Software: Pre-Algebra

	<ul style="list-style-type: none"> Enrichment: Chapter Resource Book p. 18
Accommodations/Modifications:	<ul style="list-style-type: none"> Review vocabulary and concepts such as factors, the meaning of exponents, and the correct order of operations before starting this lesson. (<i>Chapter 8.1</i>) Use highlighters to identify like bases. (<i>Chapter 8.1</i>) <p>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</p>
Section 8.2:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> Warm-Up (Check Skills You'll Need): TE p. 436 #1-7 Math Background TE p. 436
Teach Teaching Options	<ul style="list-style-type: none"> Essential Question: TE p. 436 Classroom Activity: Online Active Math Daily Notetaking Guide All in One Student Workbook p. 137 Examples 1–4: p. 436-438 Quick Check Problems 1–4 p. 436-438 Additional Examples TE p. 438 Chapter Resource Book Grab and Go File Chapter 8 p. 3
Checking for Understanding	<ul style="list-style-type: none"> Guided Problem Solving All in One Student Workbook 8-2 p. 392 Guided Practice Exercises: p. 438-439 #1-40 Closing the Lesson: TE Quick Check 1-4
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> Average: Day 1: p. 438-439 #2-40 (even) Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 11 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 19
Accommodations/Modifications:	<ul style="list-style-type: none"> Encourage students to expand difficult problems before they start to show all the factors. Give students the steps to a problem written on separate pieces of paper, and have them rearrange the steps into the correct order. (<i>Chapter 8.2</i>) <p>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</p>
Section 8.3:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> Warm-Up (Check Skills You'll Need): TE p. 447 #1-8 Math Background TE p. 447
Teach Teaching Options	<ul style="list-style-type: none"> Essential Question: TE p. 447 Classroom Activity: Online Active Math Daily Notetaking Guide All in One Student Workbook p. 140 Examples 1–4: p. 441-443 Quick Check Problems 1–4 p. 441-443 Additional Examples TE p. 443 Chapter Resource Book Grab and Go File Chapter 8 p. 4
Checking for Understanding	<ul style="list-style-type: none"> Guided Problem Solving All in One Student Workbook 8-3 p. 394 Guided Practice Exercises: p. 443-444 #1-53 Closing the Lesson: TE Quick Check 1-4
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> Average: Day 1: p. 443-444 #2-50 even Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> Study Guide: Chapter Resource Book Reteaching p. 12 ALEKS Kuta Software: Pre-Algebra Enrichment: Chapter Resource Book p. 20
Accommodations/Modifications:	<ul style="list-style-type: none"> Pair students to write similar problems and solutions with steps, and have them challenge other pairs of student to identify the properties used. (<i>Chapter 8.3</i>) <p>(Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</p>
Section 8.4:	
	College Prep

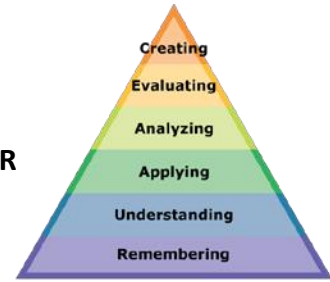
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 447 #1-8 • Math Background TE p. 447
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 447 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 143 • Examples 1–5: p. 447-449 • Quick Check Problems 1–5 p. 447-449 • Additional Examples TE p. 449 • Chapter Resource Book Grab and Go File Chapter 8 p. 5
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 8-4 p. 396 • Guided Practice Exercises: p. 449-450 #1-50 • Closing the Lesson: TE Quick Check 1-5
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 449-450 #2-50 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 13 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 21
Accommodations/Modifications:	<ul style="list-style-type: none"> • Have students memorize this template to help them convert between a positive number written in standard form and a positive number written in scientific notation. (<i>Chapter 8-4</i>) (Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).



Section 8.5:	
	College Prep
Focus and Motivate Starting Options	<ul style="list-style-type: none"> • Warm-Up (Check Skills You'll Need): TE p. 453 #1-12 • Math Background TE p. 453
Teach Teaching Options	<ul style="list-style-type: none"> • Essential Question: TE p. 453 • Classroom Activity: Online Active Math • Daily Notetaking Guide All in One Student Workbook p. 145 • Examples 1–5: p. 453-455 • Quick Check Problems 1–5 p. 453-455 • Additional Examples TE p. 455 • Chapter Resource Book Grab and Go File Chapter 8 p. 6
Checking for Understanding	<ul style="list-style-type: none"> • Guided Problem Solving All in One Student Workbook 8-5 p. 398 • Guided Practice Exercises: p. 456 #1-49 • Closing the Lesson: TE Quick Check 1-3
Practice and Apply Assigning Homework	<ul style="list-style-type: none"> • Average: Day 1: p. 456 #2-49 even • Chapter Resource Book L1 (Adapted Practice), L2 (Reteaching), L3 (Practice, Guided Problem Solving), L4 (Enrichment) • Kuta Software: Pre-Algebra
Assess and Reteach Differentiating Instruction	<ul style="list-style-type: none"> • Study Guide: Chapter Resource Book Reteaching p. 14 • ALEKS • Kuta Software: Pre-Algebra • Enrichment: Chapter Resource Book p. 22
Accommodations/Modifications:	<p>Reference materials are located in District shared directory, mathematics, modifications/accommodations folder, by chapter and section).</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 8A: Graphic Organizer p. 405 All-in-one Student Workbook
Vocabulary 8B: Reading Comprehension p. 406 All-in-one Student Workbook
Vocabulary 8C: reading/Writing Math Symbols p. 407 All-in-one Student Workbook
Vocabulary 8D: Visual Vocabulary Practice p. 408 All-in-one Student Workbook
Vocabulary 8E: Vocabulary Check p. 409 All-in-one Student Workbook
Vocabulary 8F: Vocabulary Review p. 411 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