

Algebra IA

Unit 1 – Connections to Algebra

Time: 20 days

Algebra I Objectives: 1, 2, 8 and 9

Objectives	Methods	Resources	Assessment
<p>The student will:</p> <ul style="list-style-type: none">• Translate verbal expressions into mathematical expressions• Write expressions using exponents• Use the order of operations to evaluate expressions• Solve open sentences by performing arithmetic operations• Use tables to organize data• Use graphs to organize real-life data• Identify a function and make an input-output table for the function	<ul style="list-style-type: none">• Illustrate problems on the marker board• Do textbook exercises in class• Work with partners on problem-solving activities• Have students work and explain problems on the marker board	<ul style="list-style-type: none">• Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal Littell• Practice worksheets from McDougal Littell Algebra I resource book• Worksheets from <u>Algebra With Pizzazz</u>• Teacher-generated worksheet• Calculators	<ul style="list-style-type: none">• Four quizzes• Completion of homework• Selected graded homework• Participation in class activities• Answering questions during class work• Five-Minute Checks• Mid-chapter test• Final test

Algebra IA

Unit 2 – Properties of Real Numbers

Time: 21 days

Algebra I Objectives: 1, 2, 8 and 9

Objectives	Methods	Resources	Assessment
<p>The student will:</p> <ul style="list-style-type: none"> • Graph and add integers on a number line • Add and subtract integers without using a number line • Compare rational numbers and write in increasing or decreasing order • Add and subtract rational numbers • Simplify expressions that contain rational numbers • Multiply and divide rational numbers • Organize data in a matrix • Add, subtract and multiply using matrices • Find the probability of an event • Find the odds of an event 	<ul style="list-style-type: none"> • Problem solve steps for adding or subtracting integers • Observe and write the pattern for multiplying and dividing integers • Illustrate problems on the marker board • Do textbook exercises in class • Draw Venn diagrams to illustrate number relationships • Work with partners on problem-solving activities • Have students work and explain problems on the marker board • Five-Minute Check covering previous topics 	<ul style="list-style-type: none"> • Number line on the wall and on the floor • Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal Littell • Practice worksheets from McDougal Littell Algebra I resource book • Worksheets from <u>Algebra With Pizzazz</u> • Teacher-generated worksheet • Calculators • Integer number line • Dice 	<ul style="list-style-type: none"> • Four quizzes • Completion of homework • Selected graded homework • Participation in class activities • Answering questions during class work • Five-Minute Checks • Mid-chapter test • Final test

Algebra IA

Unit 3 – Solving Linear Equations

Time: 36 days

Algebra I Objectives: 1, 2, 3 and 9

Objectives	Methods	Resources	Assessment
<p>The student will:</p> <ul style="list-style-type: none"> • Solve equations with one step by using addition, subtraction, multiplication, or division • Solve equations involving more than one operation • Solve equations with the variable on both sides • Solve equations containing grouping symbols • Solve equations containing fractions or decimals • Solve equations containing more than one variable • Rewrite an equation in function form • Use ratios and rates to solve problems • Use percents to solve problems 	<ul style="list-style-type: none"> • Write five steps for solving equations • Illustrate problems on the marker board • Do textbook exercises in class • Work with partners on problem-solving activities • Have students work and explain problems on the marker board • Five-Minute Check covering previous topics 	<ul style="list-style-type: none"> • Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal Littell • Practice worksheets from McDougal Littell Algebra I resource book • Worksheets from <u>Algebra With Pizzazz</u> • Teacher-generated worksheet • Calculators 	<ul style="list-style-type: none"> • Four quizzes • Completion of homework • Selected graded homework • Participation in class activities • Answering questions during class work • Five-Minute Checks • Mid-chapter test • Final test

Algebra IA

Unit 4 – Graphing Linear Equations and Functions

Time: 27 days

Algebra I Objectives: 1, 2, 3, 5 and 9

Objectives	Methods	Resources	Assessment
<p>The student will:</p> <ul style="list-style-type: none"> • Plot points in a coordinate plane • Draw a scatter plot and make predictions • Graph a linear equation using a table or a list of values • Graph horizontal and vertical lines • Find the intercepts of the graph of a linear equation • Use intercepts to make a quick graph • Find the slope of a line using two points • Graph a linear equation in slope-intercept form • Identify when a relation is a function • Optional – write linear equations that represent direct variation 	<ul style="list-style-type: none"> • Use the “T” model for quick intercepts • Illustrate problems on the marker board • Do textbook exercises in class • Work with partners on problem-solving activities • Have students work and explain problems on the marker board • Five-Minute Check covering previous topics 	<ul style="list-style-type: none"> • Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal Littell • Practice worksheets from McDougal Littell Algebra I resource book • Worksheets from <u>Algebra With Pizzazz</u> • Teacher-generated worksheet • Calculators • Individual dry erase boards and markers • Graph paper 	<ul style="list-style-type: none"> • Three quizzes • Completion of homework • Selected graded worksheets • Participation in class activities • Answering questions during class work • Five-Minute Checks • Mid-chapter test • Final test

Algebra IA

Unit 5 – Writing Linear Equations

Time: 158days

Algebra I Objectives: 1, 2, 3, 5 and 9

Objectives	Methods	Resources	Assessment
<p>The student will:</p> <ul style="list-style-type: none">• Use the slope-intercept form to write an equation of a line• Use slope and any point on a line to write a equation of the line• Write an equation of a line given two points on the line• Use point-slope form to write an equation of a line• Write a linear equation in standard form	<ul style="list-style-type: none">• Illustrate problems on the marker board• Do textbook exercises in class• Work with partners on problem-solving activities• Have students work and explain problems on the marker board• Five-Minute Check covering previous topics	<ul style="list-style-type: none">• Number line on the wall• Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal Littell• Practice worksheets from McDougal Littell Algebra I resource book• Worksheets from <u>Algebra With Pizzazz</u>• Teacher-generated worksheet• Calculators• Individual dry erase boards and markers• Graph paper	<ul style="list-style-type: none">• Two quizzes• Completion of homework• Selected graded homework• Participation in class activities• Answering questions during class work• Five-Minute Checks• Final test

Algebra IA

Unit 6 – Solving and Graphing Linear Inequalities

Time: 25 days

Algebra I Objectives: 1, 3, 5, 8 and 9

Objectives	Methods	Resources	Assessment
<p>The student will:</p> <ul style="list-style-type: none">Graph linear inequalities in one variableSolve one-step linear inequalitiesSolve multi-step linear inequalitiesWrite, solve and graph compound inequalitiesSolve absolute-value equations and inequalitiesGraph a linear inequality in two variablesMake and use a stem-and-leaf plot to put data in orderFind the mean, median and mode of dataDraw a box-and-whisker plot	<ul style="list-style-type: none">Illustrate problems on the marker boardDo textbook exercises in classWork with partners on problem-solving activitiesHave students work and explain problems on the marker boardFive-Minute Check covering previous topics	<ul style="list-style-type: none">Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal LittellPractice worksheets from McDougal Littell Algebra I resource bookWorksheets from <u>Algebra With Pizzazz</u>Teacher-generated worksheetCalculators	<ul style="list-style-type: none">Four quizzesCompletion of homeworkSelected graded homeworkParticipation in class activitiesAnswering questions during class workFive-Minute ChecksMid-chapter testFinal test

Algebra IA

Unit 7 – Systems of Linear Equations and Inequalities

Time: 14 days

Algebra I Objectives: 1, 3, 5, 6 and 9

Objectives	Methods	Resources	Assessment
<p>The student will:</p> <ul style="list-style-type: none">• Solve a system of linear equations by graphing• Use substitution to solve a linear system• Use linear combinations to solve a system of linear equations• Identify linear systems as having one solution, no solution or infinitely many solutions• Solve a system of linear inequalities by graphing	<ul style="list-style-type: none">• Illustrate problems on the marker board• Do textbook exercises in class• Work with partners on problem-solving activities• Have students work and explain problems on the marker board• Five-Minute Check covering previous topics	<ul style="list-style-type: none">• Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal Littell• Practice worksheets from McDougal Littell Algebra I resource book• Worksheets from <u>Algebra With Pizzazz</u>• Teacher-generated worksheet• Calculators• Graph paper• Colored pencils	<ul style="list-style-type: none">• Four quizzes• Completion of homework• Selected graded homework• Packet of puzzle worksheets• Participation in class activities• Answering questions during class work• Five-Minute Checks• Mid-chapter test• Final test