

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

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

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

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

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

# 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"> <li>• Graph linear inequalities in one variable</li> <li>• Solve one-step linear inequalities</li> <li>• Solve multi-step linear inequalities</li> <li>• Write, solve and graph compound inequalities</li> <li>• Solve absolute-value equations and inequalities</li> <li>• Graph a linear inequality in two variables</li> <li>• Make and use a stem-and-leaf plot to put data in order</li> <li>• Find the mean, median and mode of data</li> <li>• Draw a box-and-whisker plot</li> </ul> | <ul style="list-style-type: none"> <li>• Illustrate problems on the marker board</li> <li>• Do textbook exercises in class</li> <li>• Work with partners on problem-solving activities</li> <li>• Have students work and explain problems on the marker board</li> <li>• Five-Minute Check covering previous topics</li> </ul> | <ul style="list-style-type: none"> <li>• Textbook: <u>Algebra I Applications, Equations and Graphs</u>, McDougal Littell</li> <li>• Practice worksheets from McDougal Littell Algebra I resource book</li> <li>• Worksheets from <u>Algebra With Pizzazz</u></li> <li>• Teacher-generated worksheet</li> <li>• Calculators</li> </ul> | <ul style="list-style-type: none"> <li>• Four quizzes</li> <li>• Completion of homework</li> <li>• Selected graded homework</li> <li>• Participation in class activities</li> <li>• Answering questions during class work</li> <li>• Five-Minute Checks</li> <li>• Mid-chapter test</li> <li>• Final test</li> </ul> |

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