

Algebra 2 – Standard

Unit: 1 – Solving and Graphing Linear Inequalities

Standards: 2.1; 2.2; 2.5; 2.8

Estimated Time: 25 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Solve and graph one-step inequalities in one variable using addition or subtraction. M11.D.2</p> <p>Solve and graph one-step inequalities in one variable using multiplication or division. M11.D.2</p>	<p>Definitions of: Graph of an inequality, equivalent inequalities</p> <p>Graph an inequality in one variable</p> <p>Definitions of: addition property of inequality, subtraction property of inequality</p> <p>Use addition and subtraction to solve an inequality</p> <p>Definitions of: multiplication property of inequality, division property of inequality</p> <p>Multiply and divide by a positive number to solve.</p> <p>Multiply and divide by a negative number to solve</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 6 review pages</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement activity worksheets from outside publications such as PIZZAZZ!</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p>
			<p>Other:</p>	<p>Other:</p>	<p>Other:</p>

Algebra 2 – Standard

Unit: 1–Solving and Graphing Linear Inequalities  
Standards: 2.1; 2.2; 2.5; 2.8

Estimated Time: 25days  
(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Solve multi-step inequalities M11.D.2</p> <p>Solve and graph compound inequalities involving “and” M11.D.2.1.1</p>	<p>Solve simple multi-step inequalities</p> <p>Use the distributive property</p> <p>Collect variable terms</p> <p>Definition: compound inequality</p> <p>Write compound inequalities with “and”</p> <p>Solve compound inequalities with “and”</p> <p>Reverse both inequalities</p> <p>Write compound inequalities with “or”</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 6 review pages</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement activity worksheets from outside publications such as PIZZAZZ!</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p>
	<p>Solve and graph compound inequalities involving “or” M11.D.2.1.1</p>	<p>Solve compound inequalities with “or”</p> <p>Solve a multi-step compound inequality</p>	<p>Other:</p>	<p>Other:</p>	<p>Other:</p>

Algebra 2 – Standard

Unit: 1–Solving and Graphing Linear Inequalities

Standards: 2.1; 2.2; 2.5; 2.8

Estimated Time: 25 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Solve absolute-value equations M11.D.2</p> <p>Solve absolute-value inequalities in one variable M11.D.2.1.1</p>	<p>Definition: absolute value equation</p> <p>Solve an absolute value equation like <math> x  = 5</math></p> <p>Solve an absolute value equation like <math> x + 3  = 5</math></p> <p>Solve an absolute value equation like <math> 4x - 6  - 7 = -5</math></p> <p>Write an absolute value equation</p> <p>Definition: Absolute value inequality</p> <p>Rewrite the absolute value inequality as two inequalities</p> <p>Solve absolute value inequalities</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p> <p>Other:</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 6 review pages</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement activity worksheets from outside publications such as PIZZAZZ!</p> <p>Other:</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p> <p>Other:</p>

Algebra 2 – Standard

Unit: 2–Systems of Linear Equations and Inequalities  
Standards: 2.2; 2.5; 2.8

Estimated Time: 24 days  
(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	Review graphing lines using slope-intercept form M11.D.2.1.2  Graph linear systems M11.D.2.1.4  Solve linear systems by substitution M11.D.2.1.4	Definitions: system of linear equations, solution of a linear system, point of intersection  Find the point of intersection  Solve a linear system using graph and check  Solve a linear system using substitution  Substitution by solving for y first  Substitution by solving for x first	Review graphing lines using slope-intercept form, page R49 section 4.7  Warm-up exercises reinforcing previous knowledge  Brief discussion of concepts and vocabulary  Modeling  Guided practice  Independent practice  Lesson Opener  Use graphing calculators	McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 7  *Plato: Beginning Algebra: Math Problem Solving Pre-Algebra  Chapter Resource book  Related reinforcement activity worksheets from outside publications such as PIZZAZZ!	Oral assessment  Written assessments in the form of but not limited to tests and quizzes  Open-ended questions  Journal entries  Projects  Self assessment
	Solve linear systems by linear combinations M11.D.2.1.4	Definitions: linear combinations Solve a linear system by linear combinations Add the equations Multiply, then add the equations	Other:	Other:	Other:

Algebra 2 – Standard

Unit: 2–Systems of Linear Equations and Inequalities  
Standards: 2.2; 2.5; 2.8

Estimated Time: 24 days  
(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Linear systems and problem solving M11.D.2.1.4</p> <p>Special types of linear systems M11.D.2.1.4</p> <p>Graph linear inequalities in two variables M11.D.2.1</p>	<p>Use linear systems to solve real-life problems</p> <p>Choose a solution method</p> <p>Identify how many solutions a linear system has, one solution, no solution, infinitely many solutions</p> <p>Definition: linear inequality in two variables</p> <p>Check solutions of a linear inequality</p> <p>Graph a linear inequality</p> <p>Vertical lines</p> <p>Horizontal lines</p> <p>Use slope-intercept form to graph a linear inequality</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 7 and section 6.8</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement activity worksheets from outside publications such as PIZZAZZ!</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p>
	<p>Systems of linear inequalities M11.D.2.1</p>	<p>Definitions: system of linear inequalities, solution of a system of linear inequalities</p> <p>Graph a system of inequalities</p>	<p>Other:</p>	<p>Other:</p>	<p>Other:</p>

Algebra 2 – Standard

Unit: 3 – Exponents and Exponential Functions

Standards: 2.1; 2.2; 2.8

Estimated Time: 40 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Multiplication properties of exponents M.11.A.2.2.2</p> <p>Evaluate powers that have zero and negative exponents M.11.A.2.2.1</p>	<p>Define Properties: Product of Powers Power of a Power Power of a Product</p> <p>Use the product of powers property Use the power of a power property Use the power of a product property Use all three properties</p> <p>Definitions: zero exponents, negative exponents</p> <p>Evaluate expressions with zero and negative exponents</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 8</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement activity worksheets from outside publications such as PIZZAZZ!</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p>
		<p>Evaluate exponential expressions combining multiplication and zero and negative exponent properties</p> <p>Simplify exponential expressions</p>	<p>Other:</p>	<p>Other:</p>	<p>Other:</p>

Algebra 2 – Standard

Unit: 3 – Exponents and Exponential Functions

Standards: : 2.1; 2.2; 2.8

Estimated Time: 40 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Graphs of exponential functions M11.D.4.1.1</p> <p>Division properties of exponents M.11.A.2.2.2</p>	<p>Definition: exponential function</p> <p>Graph an exponential function when <math>b &gt; 1</math></p> <p>Graph an exponential function when <math>0 &lt; b &lt; 1</math></p> <p>Find the domain and range of exponential functions</p> <p>Define Division Properties of Exponents</p> <p>Quotient of Powers</p> <p>Power of a Quotient</p> <p>Use the quotient of powers property</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 8</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement activity worksheets from outside publications such as PIZZAZZ!</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p>
		<p>Use the power of a quotient property</p> <p>Simplify expressions using multiple properties</p> <p>Simplify expressions with negative exponents</p>	<p>Other:</p>	<p>Other:</p>	<p>Other:</p>

Algebra 2 – Standard

Unit: 3 – Exponents and Exponential Functions

Standards: : 2.1; 2.2; 2.8

Estimated Time: 40 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Use scientific notation M.11.A.1.1.3</p> <p>Write and graph exponential growth functions M11.D.4.1.1 M11.E.4</p>	<p>Definition: scientific notation</p> <p>Write numbers in decimal form from scientific notation</p> <p>Write numbers in scientific notation</p> <p>Perform operations with scientific notation</p> <p>Definitions: exponential growth, growth rate, growth factor</p> <p>Write an exponential growth model <math>y = C(1 + r)^t</math></p> <p>Find the balance in an account using <math>A = P(1 + r)^t</math></p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 8</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement activity worksheets from outside publications such as PIZZAZZ!</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p>
		<p>Use an exponential growth model for population</p> <p>Use a model with a large growth rate</p>	<p>Other:</p>	<p>Other:</p>	<p>Other:</p>

Algebra 2 – Standard

Unit: 3 – Exponents and Exponential Functions

Standards: 2.1; 2.2; 2.8

Estimated Time: 40 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	Write and graph exponential decay functions M11.D.4.1.1 M11.E.4	Definitions: exponential decay, decay rate, decay factor  Graphs: exponential growth model, exponential decay model  Write an exponential decay model  Graph an exponential decay model	Warm-up exercises reinforcing previous knowledge  Brief discussion of concepts and vocabulary  Modeling  Guided practice  Independent practice  Lesson Opener	McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 8  *Plato: Beginning Algebra: Math Problem Solving Pre-Algebra  Chapter Resource book  Related reinforcement activity worksheets from outside publications such as PIZZAZZ!	Oral assessment  Written assessments in the form of but not limited to tests and quizzes  Open-ended questions  Journal entries  Projects  Self assessment
			Other:	Other:	Other:

Algebra 2 – Standard

Unit: 4 – Quadratic Equations and Functions

Standards: 2.1; 2.2; 2.5; 2.8

Estimated Time: 40 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Evaluate and approximate square roots M11.A.1.1.2 M11.A.3.2.1</p> <p>Solve quadratic equations by finding square roots M11.A.2.2</p>	<p>Definitions: square root, positive square root, negative square root, radicand, perfect square, radical expression</p> <p>Find the square roots of numbers</p> <p>Evaluate a radical expression</p> <p>Definition: quadratic equation</p> <p>Solve <math>x^2=d</math> by finding square roots</p> <p>Solve quadratic equations using square roots</p> <p>Rewrite before finding square roots</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p> <p>Use graphing calculators</p> <p>Other:</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 9</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement worksheets from outside publications such as PIZZAZZ!</p> <p>Other:</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p> <p>Other:</p>



Algebra 2 – Standard

Unit: 4 – Quadratic Equations and Functions

Standards: 2.1; 2.2; 2.5; 2.8

Estimated Time: 40 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Use a graph to find or check a solution of a quadratic equation M11.D.4.1</p> <p>Solve quadratic equations using the quadratic formula M11.D.2.1</p>	<p>Definition: roots of a quadratic equation</p> <p>Steps for estimating a solution by graphing</p> <p>Use graphs to solve quadratic equations</p> <p>Definition: the quadratic formula</p> <p>Use the quadratic formula to solve</p> <p>Write in standard form, then use the quadratic formula</p> <p>Model vertical motion</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p> <p>Use graphing calculators</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 9</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement worksheets from outside publications such as PIZZAZZ!</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p>
			<p>Other:</p>	<p>Other:</p>	<p>Other:</p>

Algebra 2 – Standard

Unit: 4 – Quadratic Equations and Functions

Standards: 2.1; 2.2; 2.5; 2.8

Estimated Time: 40 days

(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	Use the Discriminant to determine the number of solutions of a quadratic equation M11.D.2.1	Definition: discriminant  Find the number of solutions by finding the value of the discriminant  Find the number of x-intercepts	Warm-up exercises reinforcing previous knowledge  Brief discussion of concepts and vocabulary  Modeling  Guided practice  Independent practice  Lesson Opener	McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 9  *Plato: Beginning Algebra: Math Problem Solving Pre-Algebra  Chapter Resource book  Related reinforcement activity worksheets from outside publications such as PIZZAZZ!	Oral assessment  Written assessments in the form of but not limited to tests and quizzes  Open-ended questions  Journal entries  Projects  Self assessment
			Other:	Other:	Other:



Algebra 2 – Standard

Unit: 5 – Polynomials and Factoring  
Standards: 2.1; 2.2; 2.8

Estimated Time: 40 days  
(\* as time permits)

Date	Benchmarks	Skills/Knowledge	Activities	Resources	Assessments
	<p>Use special product patterns to multiply polynomials M11.D.2.2.1</p> <p>Solve and graph quadratic equations in factored form M11.D.2.1.5</p>	<p>Definitions: sum and difference pattern, square of a binomial pattern</p> <p>Use the sum and difference pattern</p> <p>Use the square of a binomial pattern</p> <p>Find the area of a figure</p> <p>Definitions: factored form, zero-product property</p> <p>Use the zero product property to solve quadratic equation.</p> <p>Solve a repeated factor equation</p> <p>Solve a factored cubic equation</p> <p>Graph a factored equation.</p>	<p>Warm-up exercises reinforcing previous knowledge</p> <p>Brief discussion of concepts and vocabulary</p> <p>Modeling</p> <p>Guided practice</p> <p>Independent practice</p> <p>Lesson Opener</p> <p>Other:</p>	<p>McDougal Littell Algebra 1 Concepts and Skills, Vol. 2 Chapter 10</p> <p>*Plato: Beginning Algebra: Math Problem Solving Pre-Algebra</p> <p>Chapter Resource book</p> <p>Related reinforcement worksheets from outside publications such as PIZZAZZ!</p> <p>Other:</p>	<p>Oral assessment</p> <p>Written assessments in the form of but not limited to tests and quizzes</p> <p>Open-ended questions</p> <p>Journal entries</p> <p>Projects</p> <p>Self assessment</p> <p>Other:</p>



