

McDougal Littell Algebra 2 – New York Edition

Pacing	Chapter/Lesson/ Unit	Lesson Aim for Topic	Objectives for Aim	Suggested Classwork	Suggested Homework	NYSED Performance Indicator	Taught in MS-HS (Prerequisites)
<i>Lesson 1.2 Evaluate and Simplify Algebraic Expressions</i>							
Semester 1: Day 1	Evaluate expressions involving real numbers and simplify algebraic expressions.	How can you apply properties to work with algebraic expressions.	Use the order of operations. Simplify by combining like terms.	pp. 10-13: Examples 1-5 pp. 11-13: Guided Practice 1-15 p. 17: Activity - Evaluate Expressions	pp. 13-16: Exs. 1, 3, 10-14 even, 16-18, 24, 29-32, 35-49 odd, 52-54, 58, 60-62 Test Prep pp. 13-15: Exs. 2, 33, 51, 59 Mixed Review p. 16: Exs. 64, 65	A2.A.12 Evaluate exponential expressions, including those with base e	A.N.1 Identify and apply the properties of real numbers (closure, commutative, associative, distributive, identity, inverse) A.N.6 Evaluate expressions involving factorial(s), absolute value(s), and exponential expression(s)

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Lesson 1.6 Solve Linear Inequalities							
Semester 1: Day 2	Part 1: Solve simple linear inequalities in one variable.	How do you solve compound inequalities?	Graph linear inequalities in one variable. Use transformations to produce equivalent inequalities.	pp. 41–43: Examples 1–4 pp. 41–43: Guided Practice 1–8	pp. 44–47: Exs. 1, 7–14, 19–27 Test Prep pp. 44, 45: Exs. 2, 15	A2.A.1 Solve absolute value equations and inequalities involving linear expressions in one variable	A.A.4 Translate verbal sentences into mathematical equations or inequalities A.A.6 Analyze and solve verbal problems whose solution requires solving a linear equation in one variable or linear inequality in one variable
Semester 1: Day 3	Part 2: Solve compound linear inequalities in one variable.	How do you solve “and” and “or” inequalities?	Solve “and” inequalities written as double inequalities. Solve “or” inequalities by rewriting as two simple inequalities.	pp. 43, 44: Examples 5–7 pp. 43, 44: Guided Practice 9–13 pp. 48, 49: Problem Solving Workshop – Using Alternative Methods	pp. 45–47: Exs. 28–35, 37–47 odd, 50–55, 57, 58 Test Prep pp. 45, 46: Exs. 36, 56, 59 Mixed Review p. 47: Exs. 61, 62	A2.A.1 Solve absolute value equations and inequalities involving linear expressions in one variable A2.A.1 Solve absolute value equations and inequalities involving linear expressions in one variable	A.A.21 Determine whether a given value is a solution to a given linear equation in one variable or linear inequality in one variable A.A.24 Solve linear inequalities in one variable

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Lesson 1.7 Solve Absolute Value Equations and Inequalities							
Semester 1: Day 4	Part 1: How can you solve equations involving absolute value expressions?	Rewrite an absolute value equation to solve it.	Interpret absolute value equations. Identify extraneous solutions.	p. 50: Activity – Absolute Value Equations and Inequalities pp. 51, 52: Examples 1–3 p. 53: Guided Practice 1–6	pp. 55, 56: Exs. 1, 6–8, 12–17, 24–32, 34–39, 41, 42 Test Prep pp. 55, 56: Exs. 2, 33, 40	A2.A.1 Solve absolute value equations and inequalities involving linear expressions in one variable	A.N.6 Evaluate expressions involving factorial(s), absolute value(s), and exponential expression(s) A.A.4 Translate verbal sentences into mathematical equations or inequalities
Semester 1: Day 5	Part 2: How can you solve inequalities involving absolute value expressions?	Rewrite an absolute value inequality to solve it.	Interpret absolute value inequalities. Write a range using an absolute value inequality.	pp. 53, 54: Examples 4–6 pp. 53, 55: Guided Practice 7–13	pp. 56–58: Exs. 49–62, 65, 74–81 Test Prep p. 56: Exs. 63, 64 Mixed Review p. 58: Exs. 83, 84	A2.A.1 Solve absolute value equations and inequalities involving linear expressions in one variable	A.A.6 Analyze and solve verbal problems whose solution requires solving a linear equation in one variable or linear inequality in one variable A.A.24 Solve linear inequalities in one variable

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Chapter 1 Review							
Semester 1: Day 6	Chapter 1 Review	Review of Lessons 1.2, 1.6, and 1.7	Review of evaluating algebraic expressions, solving linear inequalities, and solving absolute value equations and inequalities.	pp. 62, 64: Exs. 10-16, 34-47	p. 65: Exs. 5, 6, 19-27	See lessons 1.2, 1.6, and 1.7	See lessons 1.2, 1.6, and 1.7
Chapter 1 Assessment							
Semester 1: Day 7	Chapter 1 Test	Assessment on Lessons 1.2, 1.6, and 1.7	Test on evaluating algebraic expressions, solving linear inequalities, and solving absolute value equations and inequalities.	pp. 66, 67: Problem p. 67: Practice 1-3	pp. 68-69: Exs. 1, 3, 10, 11, 13, 15, 17-19	See lessons 1.2, 1.6, and 1.7	See lessons 1.2, 1.6, and 1.7

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Lesson 2.1 Represent Relations and Functions

Semester 1: Day 8	Represent relations and graph linear functions.	How can you represent relations and identify functions using equations, notation, diagrams, and graphs?	<p>Apply the vertical line test.</p> <p>Use function notation.</p> <p>Graph equations in two variables.</p>	<p>pp. 72–76: Examples 1–6</p> <p>pp. 73–76: Guided Practice 1–7</p> <p>pp. 80, 81: Extension – Use Discrete and Continuous Functions</p>	<p>pp. 76–79: Exs. 1, 6–8, 12–17, 20–23, 28–30, 34–39, 42–45, 47, 48</p> <p>Test Prep pp. 76–78: Exs. 2, 9, 24, 46, 49</p> <p>Mixed Review p. 79: Exs. 51, 52</p> <p>p. 81: Exs. 1–9</p>	<p>A2.A.37 Define a relation and function</p> <p>A2.A.38 Determine when a relation is a function</p> <p>A2.A.39 Determine the domain and range of a function from its equation</p> <p>A2.A.40 Write functions in functional notation</p> <p>A2.A.41 Use functional notation to evaluate functions for given values in the domain</p>	<p>A.G.3 Determine when a relation is a function, by examining ordered pairs and inspecting graphs of relations</p> <p>A.G.4 Identify and graph linear, quadratic (parabolic), absolute value, and exponential functions</p>
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<i>Lesson NYC- Identify One-to-One and Onto Functions</i>							
Semester 1: Day 9	Determine when a function is one-to-one and/or onto.	How can you identify one-to-one and onto functions?	Use input-output diagrams and graphs to identify one-to-one and onto functions.	pp. B4, B5 Examples 1, 2	p. B5 Practice 1–10	A2.A.43 Determine if a function is one-to-one, onto, or both	A.G.3 Determine when a relation is a function, by examining ordered pairs and inspecting graphs of relations

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Lesson 2.5 Model Direct Variation							
Semester 1: Day 10	Write and graph direct variation equations	How can you identify a direct variation from its equation and graph?	Model direct variation with an equation. Use ratios to identify direct variation.	pp. 107, 108: Examples 1-3 pp. 107-109: Guided Practice 1-6	pp. 109-111: Exs. 1, 5-8, 14-16, 21-23, 27-29, 32-35, 38, 41-43 Test Prep pp. 109-111: Exs. 2, 17, 30, 40, 44 Mixed Review p. 111: Exs. 46, 47	A2.A.5 Use direct and inverse variation to solve for any unknown values	A.A.4 Translate verbal sentences into mathematical equations or inequalities A.A.5 Write algebraic equations or inequalities that represent a situation A.A.6 Analyze and solve verbal problems whose solution requires solving a linear equation in one variable or linear inequality in one variable A.G.4 Identify and graph linear, quadratic (parabolic), absolute value, and exponential functions

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Lesson 2.6 Draw Scatter Plots and Best-Fitting Lines							
Semester 1: Day 11	Part 1: Describe the correlation shown by a scatter plot.	How can you estimate correlation from a scatter plot?	Identify positive and negative correlation from a scatter plot. Estimate a correlation coefficient from a scatter plot.	p. 112: Activity – Fitting a Line to Data pp. 113, 114: Examples 1, 2 p. 114: Guided Practice 1–3	p. 117: Exs. 1, 3–9 Test Prep p. 117: Ex. 2 Mixed Review p. 120: Exs. 30, 31	A2.S.7 Determine the function for the regression model, using appropriate technology, and use the regression function to interpolate and extrapolate from the data	A.A.35 Write the equation of a line, given the coordinates of two points on the line A.S.7 Create a scatter plot of bivariate data A.S.8 Construct manually a reasonable line of best fit for a scatter plot and determine the equation of that line
Semester 1: Day 12	Part 2: Find and use best-fitting lines.	How can you find the equation of a line of best fit from a scatter plot?	Find a best-fitting line. Use a best-fitting line to make predictions.	pp. 114–116: Examples 3–5 pp. 117: Guided Practice 4	pp. 117–120: Exs. 10–15, 17–20, 24–27 Test Prep pp. 118, 119: Exs. 16, 21, 28	A2.S.8 Interpret within the linear regression model the value of the correlation coefficient as a measure of the strength of the relationship	A.S.12 Identify the relationship between the independent and dependent variables from a scatter plot (positive, negative, or none)

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Lesson 2.7 Use Absolute Value Functions and Transformations

Semester 1: Day 13	Part 1: Graph absolute value functions.	How can you use the equation of an absolute value function to make its graph?	Identify the parent absolute value function. Identify transformations to the parent absolute value function.	p. 121: Activity - Exploring Transformations pp. 123-125: Examples 1-3 p. 125: Guided Practice 1-3	pp. 127, 128: Exs. 1, 4-14, 36, 37 Test Prep pp. 127, 128: Exs. 2, 32	A2.A.46 Perform transformations with functions and relations: $f(x + a)$, $f(x) + a$, $f(-x)$, $-f(x)$, $af(x)$	A.G.4 Identify and graph linear, quadratic (parabolic), absolute value, and exponential functions A.G.5 Investigate and generalize how changing the coefficients of a function affects its graph
Semester 1: Day 14	Part 2: Apply transformations to a graph.	How can you identify transformations of a function from its equation?	Transform the graph of a general function.	pp. 125, 126: Examples 4, 5 pp. 125, 126: Guided Practice 4-7	pp. 127-129: Exs. 17-26, 29, 30, 39, 41 Test Prep pp. 127-129: Exs. 27, 28, 31, 33, 38, 40 Mixed Review p. 129: Exs. 43, 44	A2.A.46 Perform transformations with functions and relations: $f(x + a)$, $f(x) + a$, $f(-x)$, $-f(x)$, $af(x)$	

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Chapter 2 Review							
Semester 1: Day 15	Chapter 2 Review	Review of Lessons 2.1, 2.5-2.7	Review of relations and functions, direct variation, scatter plots and best-fitting lines, and absolute value functions and transformations	pp. 141, 143, 144: Exs. 1-7, 19-27	p. 145: Exs. 1-3, 14-20, 26, 27	See lessons 2.1, 2.5, 2.6, and 2.7	See lessons 2.1, 2.5, 2.6, and 2.7
Chapter 2 Assessment							
Semester 1: Day 16	Chapter 2 Test	Test on Lessons 2.1, 2.5-2.7	Test on relations and functions, direct variation, scatter plots and best-fitting lines, and absolute value functions and transformations	pp. 146-147: Problem p. 147: Practice 1	pp. 148, 149: Exs. 1, 4, 8, 13-16	See lessons 2.1, 2.5, 2.6, and 2.7	See lessons 2.1, 2.5, 2.6, and 2.7