

Northpoint Horizons

***Math Elevations™ (Comprehensive Intervention System)***  
**Correlated to the Grade 8**  
**NYS Mathematics Core**  
**Curriculum**

This document provides a sampling of the extensive math directives offered throughout the *Math Elevations* program that meet the NYS Mathematics Core Curriculum.

Grade 8

Math Content Standard	Math Elevations Level H (Grade 8) Teacher's Guide Examples/Lessons
<b>Problem Solving Strand</b>	
<b><i>Students will build new mathematical knowledge through problem solving.</i></b>	
8.PS.1 Use a variety of strategies to understand new mathematical content and to develop more efficient methods	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 1 – Lesson 7: <i>Exponents</i> pp. 37-39 Lesson 8: <i>Square Roots</i> pp. 40-42 Unit 2 – Lesson 6: <i>Rules of Exponents</i> pp. 62-64 Lesson 7: <i>Negative and Zero Exponents</i> pp. 65-67 Lesson 8: <i>Scientific Notation</i> pp. 68-70
8.PS.2 Construct appropriate extensions to problem situations	Unit 3 – Lesson 1: <i>Commutative, Associative, and Distributive Properties</i> pp. 74-77 Lesson 2: <i>Order of Operations</i> pp. 78-80
8.PS.3 Understand and demonstrate how written symbols represent mathematical ideas	Unit 1 – Lesson 7: <i>Exponents</i> pp. 37-39 Lesson 8: <i>Square Roots</i> pp. 40-42 Unit 2 – Lesson 6: <i>Rules of Exponents</i> pp. 62-64 Lesson 7: <i>Negative and Zero Exponents</i> pp. 65-67 Lesson 8: <i>Scientific Notation</i> pp. 68-70
<b><i>Students will solve problems that arise in mathematics and in other contexts.</i></b>	

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8.PS.4 Observe patterns and formulate generalizations	Unit 3 – Lesson 3: <i>Substituting Values for Variables in Formulas</i> pp. 81-83
8.PS.5 Make conjectures from generalizations	Unit 1 – Lesson 3: <i>Adding Integers Using Absolute Value</i> pp. 24-27 Unit 8 – Lesson 1: <i>Counting Methods</i> pp. 216-219 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 229-232
8.PS.6 Represent problem situations verbally, numerically, algebraically, and graphically	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 229-232 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 237-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
<b><i>Students will apply and adapt a variety of appropriate strategies to solve problems.</i></b>	
8.PS.7 Understand that there is no one right way to solve mathematical problems but that different methods have advantages and disadvantages	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.PS.8 Understand how to break a complex problem into simpler parts or use a similar problem type to solve a problem	Unit 4 – Lesson 5: <i>Solving Percent Problems Using a Proportion</i> pp. 117-119 Lesson 6: <i>Using Proportions to Solve other Percent Problems</i> pp. 120-123
8.PS.10 Use proportionality to model problems	Unit 4 – Lesson 2: <i>Writing and Solving Proportions</i> pp. 108-110 Lesson 5: <i>Solving Percent Problems Using a Proportion</i> pp. 117-119 Lesson 6: <i>Using Proportions to Solve other Percent Problems</i> pp. 120-123
8.PS.11 Work in collaboration with others to solve problems	Unit 4 – Lesson 1: <i>Ratios and Rates</i> pp. 104-107
<b><i>Students will monitor and reflect on the process of mathematical problem solving.</i></b>	

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8.PS.12 Interpret solutions within the given constraints of a problem	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150
8.PS.13 Set expectations and limits for possible solutions	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.PS.14 Determine information required to solve the problem	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.PS.15 Choose methods for obtaining required information	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.PS.16 Justify solution methods through logical argument	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.PS.17 Evaluate the efficiency of different representations of a problem	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
<b>Reasoning and Proof Strand</b>	
<b><i>Students will recognize reasoning and proof as fundamental aspects of mathematics.</i></b>	
8.RP.1 Recognize that mathematical ideas can be supported by a variety of strategies	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223 Lesson 3: <i>Mean, Median, and Mode</i> pp. 222-224
<b><i>Students will make and investigate mathematical conjectures.</i></b>	
8.RP.2 Use mathematical strategies to reach a conclusion	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.RP.3 Evaluate conjectures by distinguishing relevant from irrelevant information to reach a conclusion or make appropriate estimates	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
<b><i>Students will develop and evaluate mathematical arguments and proofs.</i></b>	
8.RP.4 Provide supportive arguments for conjectures	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.RP.5 Develop, verify, and explain an argument, using appropriate mathematical ideas and language	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
<b><i>Students will select and use various types of reasoning and methods of proof.</i></b>	
8.RP.6 Support an argument by using a systematic approach to test more than one case	Unit 8 – Lesson 3: <i>Mean, Median, and Mode</i> pp. 222-224
8.RP.7 Devise ways to verify results or use counterexamples to refute incorrect statements	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.RP.8 Apply inductive reasoning in making and supporting mathematical conjectures	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243

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<b>Communication Strand</b>	
<b><i>Students will organize and consolidate their mathematical thinking through communication.</i></b>	
8.CM.1 Provide a correct, complete, coherent, and clear rationale for thought process used in problem solving	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.CM.2 Provide an organized argument which explains rationale for strategy selection	Unit 8 – Lesson 2: <i>Making Predictions</i> pp. 220-223
8.CM.3 Organize and accurately label work	Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 225-228 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 230-233 Lesson 6: <i>Line Graphs</i> pp. 233-236 Lesson 7: <i>Circle Graphs</i> pp. 238-240
<b><i>Students will communicate their mathematical thinking coherently and clearly to peers, teachers, and others.</i></b>	
8.CM.4 Share organized mathematical ideas through the manipulation of objects, numerical tables, drawings, pictures, charts, graphs, tables, diagrams, models and symbols in written and verbal form	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 225-228 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 230-233 Lesson 6: <i>Line Graphs</i> pp. 233-236 Lesson 7: <i>Circle Graphs</i> pp. 238-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
<b><i>Students will analyze and evaluate the mathematical thinking and strategies of others.</i></b>	
8.CM.6 Analyze mathematical solutions shared by others	Unit 4 – Lesson 1: <i>Ratios and Rates</i> pp. 104-107
<b><i>Students will use the language of mathematics to express mathematical ideas precisely.</i></b>	
8.CM.9 Increase their use of mathematical vocabulary and language when communicating with others	Unit 3 – Lesson 1: <i>Commutative, Associative, and Distributive Properties</i> pp. 74-77
8.CM.10 Use appropriate language, representations, and terminology when describing objects, relationships, mathematical solutions, and rationale	Unit 3 – Lesson 1: <i>Commutative, Associative, and Distributive Properties</i> pp. 74-77
8.CM.11 Draw conclusions about mathematical ideas through decoding, comprehension, and interpretation of mathematical visuals, symbols, and	Unit 4 – Lesson 2: <i>Writing and Solving Proportions</i> pp. 108-110

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technical writing	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 225-228
<b>Connections Strand</b>	
<b><i>Students will recognize and use connections among mathematical ideas.</i></b>	
8.CN.1 Understand and make connections among multiple representations of the same mathematical idea	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.CN.2 Recognize connections between subsets of mathematical ideas	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243 Lesson 3: <i>Mean, Median, and Mode</i> pp. 224-226
8.CN.3 Connect and apply a variety of strategies to solve problems	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243 Lesson 3: <i>Mean, Median, and Mode</i> pp. 224-226
<b><i>Students will understand how mathematical ideas interconnect and build on one another to produce a coherent whole.</i></b>	
8.CN.4 Model situations mathematically, using representations to draw conclusions and formulate new situations	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 229-232 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 237-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.CN.5 Understand how concepts, procedures, and mathematical results in one area of mathematics can be used to solve problems in other areas of mathematics	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
<b><i>Students will recognize and apply mathematics in contexts outside of mathematics.</i></b>	
8.CN.6 Recognize and provide examples of the presence of mathematics in their daily lives	Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229
8.CN.7 Apply mathematical ideas to problem situations that develop outside of mathematics	Unit 8 – Lesson 3: <i>Mean, Median, and Mode</i> pp. 222-224
<b>Representation Strand</b>	
<b><i>Students will create and use representations to organize, record, and communicate mathematical ideas.</i></b>	
8.R.1 Use physical objects, drawings, charts, tables, graphs, symbols,	Unit 4 –

<b>Math Content Standard</b>	<b>Math Elevations Level H (Grade 8) Teacher's Guide Examples/Lessons</b>
equations, or objects created using technology as representations	Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 229-232 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 237-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.R.2 Explain, describe, and defend mathematical ideas using representations	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 225-228 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 230-233 Lesson 6: <i>Line Graphs</i> pp. 233-236 Lesson 7: <i>Circle Graphs</i> pp. 238-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.R.3 Recognize, compare, and use an array of representational forms	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 229-232 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 237-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.R.4 Explain how different representations express the same relationship	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.R.5 Use standard and non-standard representations with accuracy and detail	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150

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	Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 230-233 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 238-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
<b><i>Students will select, apply, and translate among mathematical representations to solve problems.</i></b>	
8.R.6 Use representations to explore problem situations	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 230-233 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 238-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.R.7 Investigate relationships between different representations and their impact on a given problem	Unit 8 – Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.R.8 Use representation as a tool for exploring and understanding mathematical ideas	Unit 8 – Lesson 1: <i>Counting Methods</i> pp. 216-219 Lesson 2: <i>Making Predictions</i> pp. 219-221
<b><i>Students will use representations to model and interpret physical, social, and mathematical phenomena.</i></b>	
8.R.9 Use mathematics to show and understand physical phenomena (e.g., make and interpret scale drawings of figures or scale models of objects)	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113
8.R.10 Use mathematics to show and understand social phenomena (e.g., determine profit from sale of yearbooks)	Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 230-233 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 238-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
8.R.11 Use mathematics to show and understand mathematical phenomena (e.g., use tables, graphs, and equations to show a pattern underlying a function)	Unit 4 – Lesson 3: <i>Scale Drawings and Models</i> pp. 111-113 Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150

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	Unit 8 – Lesson 4: <i>Scatter Plots</i> pp. 227-229 Lesson 5: <i>Box-and-Whiskers Plots</i> pp. 230-233 Lesson 6: <i>Line Graphs</i> pp. 234-237 Lesson 7: <i>Circle Graphs</i> pp. 238-240 Lesson 8: <i>Appropriate Graphs</i> pp. 241-243
<b>Number Sense and Operations Strand</b>	
<b><i>Students will understand meanings of operations and procedures, and how they relate to one another.</i></b>	
8.N.1 Develop and apply the laws of exponents for multiplication and division	Unit 1 – Lesson 7: <i>Exponents</i> pp. 37-39 Unit 2 – Lesson 6: <i>Rules of Exponents</i> pp. 62-64 Lesson 7: <i>Negative and Zero Exponents</i> pp. 65-67 Lesson 8: <i>Scientific Notation</i> pp. 68-70
8.N.2 Evaluate expressions with integral exponents	Unit 1 – Lesson 7: <i>Exponents</i> pp. 37-39 Unit 2 – Lesson 6: <i>Rules of Exponents</i> pp. 62-64 Lesson 7: <i>Negative and Zero Exponents</i> pp. 65-67 Lesson 8: <i>Scientific Notation</i> pp. 68-70
8.N.3 Read, write, and identify percents less than 1% and greater than 100%	Unit 4 – Lesson 4: <i>Fractions, Decimals, and Percents</i> pp. 114-116
8.N.4 Apply percents to tax, percent increase/decrease, simple interest, sale price, commission, interest rates, and gratuities.	Unit 4 – Lesson 4: <i>Fractions, Decimals, and Percents</i> pp. 114-116 Lesson 5: <i>Solving Percent Problems Using a Proportion</i> pp. 117-119 Lesson 7: <i>Percent of Change</i> pp. 124-126 Lesson 8: <i>Percent Applications</i> pp. 127-129
<b><i>Students will compute accurately and make reasonable estimates.</i></b>	
8.N.5 Estimate a percent of quantity, given an application	Unit 4 – Lesson 4: <i>Fractions, Decimals, and Percents</i> pp. 114-116
8.N.6 Justify the reasonableness of answers using estimation	Unit 4 – Lesson 4: <i>Fractions, Decimals, and Percents</i> pp. 114-116
<b>Algebra Strand</b>	

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<b>Students will represent and analyze algebraically a wide variety of problem solving situations.</b>	
8.A.1 Translate verbal sentences into algebraic inequalities	Unit 3 – Lesson 6: <i>Solving Inequalities by Addition and Subtraction</i> pp. 90-93 Lesson 7: <i>Solving Inequalities Using Multiplication and Division</i> pp. 94-97
8.A.2 Write verbal expressions that match given mathematical expressions	Unit 3 – Lesson 6: <i>Solving Inequalities by Addition and Subtraction</i> pp. 90-93 Lesson 7: <i>Solving Inequalities Using Multiplication and Division</i> pp. 94-97 Unit 5 – Lesson 3: <i>Translating and Solving Word Problems</i> pp. 138-140
8.A.3 Describe a situation involving relationships that matches a given graph	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Lesson 7: <i>Interpreting Linear Functions</i> pp. 151-153
8.A.4 Create a graph given a description or an expression for a situation involving a linear or nonlinear relationship	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Lesson 7: <i>Interpreting Linear Functions</i> pp. 151-153
8.A.5 Use physical models to perform operations with polynomials	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Lesson 7: <i>Interpreting Linear Functions</i> pp. 151-153
<b>Students will perform algebraic procedures accurately.</b>	
8.A.6 Multiply and divide monomials	Unit 3 – Lesson 5: <i>Solving Equations Using Multiplication or Division</i> pp. 87-89
8.A.7 Add and subtract polynomials (integer coefficients)	Unit 3 – Lesson 6: <i>Solving Inequalities by Addition and Subtraction</i> pp. 90-93 Unit 5 – Lesson 1: <i>Solving Two-Step Equations</i> pp. 132-134 Lesson 2: <i>Solving Multi-Step Equations</i> pp. 135-137
8.A.8 Multiply a binomial by a monomial or a binomial (integer coefficients)	Unit 5 – Lesson 1: <i>Solving Two-Step Equations</i> pp. 132-134 Unit 5 – Lesson 2: <i>Solving Multi-Step Equations</i> pp. 135-137

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8.A.12 Apply algebra to determine the measure of angles formed by or contained in parallel lines cut by a transversal and by intersecting lines	Unit 6 – Lesson 2: <i>Angles in Parallel Lines Cut by a Transversal</i> pp. 164-166
8.A.13 Solve multi-step inequalities and graph the solution set on a number line	Unit 3 – Lesson 7: <i>Solving Inequalities Using Multiplication and Division</i> pp. 94-97
8.A.14 Solve linear inequalities by combining like terms, using the distributive property, or moving variables to one side of the inequality (include multiplication or division of inequalities by a negative number)	Unit 3 – Lesson 1: <i>Commutative, Associative, and Distributive Properties</i> pp. 74-77 Lesson 6: <i>Solving Inequalities by Addition and Subtraction</i> pp. 90-93 Lesson 7: <i>Solving Inequalities Using Multiplication and Division</i> pp. 94-97
<b><i>Students will recognize, use, and represent algebraically patterns, relations, and functions.</i></b>	
8.A.15 Understand that numerical information can be represented in multiple ways: arithmetically, algebraically, and graphically	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150 Lesson 7: <i>Interpreting Linear Functions</i> pp. 151-153
8.A.16 Find a set of ordered pairs to satisfy a given linear numerical pattern (expressed algebraically); then plot the ordered pairs and draw the line	Unit 5 – Lesson 6: <i>Graphing Linear Functions</i> pp. 147-150
8.A.17 Define and use correct terminology when referring to function (domain and range)	Unit 5 – Lesson 4: <i>Relations and Functions</i> pp. 141-143
8.A.18 Determine if a relation is a function	Unit 5 – Lesson 4: <i>Relations and Functions</i> pp. 141-143
8.A.19 Interpret multiple representations using equation, table of values, and graph	Unit 5 – Lesson 4: <i>Relations and Functions</i> pp. 141-143
Geometry Strand	
<b><i>Students will identify and justify geometric relationships, formally and informally.</i></b>	
8.G.1 Identify pairs of vertical angles as congruent	Unit 6 – Lesson 1: <i>Angles</i> pp. 160-163
8.G.2 Identify pairs of supplementary and complementary angles	Unit 6 – Lesson 1: <i>Angles</i> pp. 160-163
8.G.3 Calculate the missing angle in a supplementary or complementary pair	Unit 6 – Lesson 1: <i>Angles</i> pp. 160-163
8.G.4 Determine angle pair relationships when given two parallel lines cut by	Unit 6 –

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a transversal	Lesson 2: <i>Angles in Parallel Lines Cut by a Transversal</i> pp. 164-166
8.G.5 Calculate the missing angle measurements when given two parallel lines cut by a transversal	Unit 6 – Lesson 2: <i>Angles in Parallel Lines Cut by a Transversal</i> pp. 164-166
8.G.6 Calculate the missing angle measurements when given two intersecting lines and an angle	Unit 6 – Lesson 2: <i>Angles in Parallel Lines Cut by a Transversal</i> pp. 164-166
<b>Students will apply transformations and symmetry to analyze problem solving situations.</b>	
8.G.7 Describe and identify transformations in the plane, using proper function notation (rotations, reflections, translations, and dilations)	Unit 6 – Lesson 6: <i>Similarity and Dilations</i> pp. 177-179 Lesson 7: <i>Reflections and Translations in the Coordinate Plane</i> pp. 180-183 Lesson 8: <i>Rotations in the Coordinate Plane</i> pp. 184-186
8.G.8 Draw the image of a figure under rotations of 90 and 180 degrees	Unit 6 – Lesson 8: <i>Rotations in the Coordinate Plane</i> pp. 184-186
8.G.9 Draw the image of a figure under a reflection over a given line	Unit 6 – Lesson 7: <i>Reflections and Translations in the Coordinate Plane</i> pp. 180-183
8.G.10 Draw the image of a figure under a translation	Unit 6 – Lesson 7: <i>Reflections and Translations in the Coordinate Plane</i> pp. 180-183
8.G.11 Draw the image of a figure under a dilation	Unit 6 – Lesson 6: <i>Similarity and Dilations</i> pp. 177-179
8.G.12 Identify the properties preserved and not preserved under a reflection, rotation, translation, and dilation	Unit 6 – Lesson 6: <i>Similarity and Dilations</i> pp. 177-179 Lesson 7: <i>Reflections and Translations in the Coordinate Plane</i> pp. 180-183 Lesson 8: <i>Rotations in the Coordinate Plane</i> pp. 184-187
<b>Students will apply coordinate geometry to analyze problem solving situations.</b>	
8.G.13 Determine the slope of a line from a graph and explain the <i>meaning of slope as a constant rate of change</i>	Unit 5 – Lesson 8: <i>Slope</i> pp. 154-157
8.G.14 Determine the y-intercept of a line from a graph and be able to explain the y-intercept	Unit 6 – Lesson 7:

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	<i>Reflections and Translations in the Coordinate Plane</i> pp. 180-183
8.G.15 Graph a line using a table of values	Unit 5 – Lesson 8: <i>Slope</i> pp. 154-157
8.G.16 Determine the equation of a line given the slope and the y-intercept	Unit 5 – Lesson 8: <i>Slope</i> pp. 154-157
8.G.17 Graph a line from an equation in slope-intercept form ( $y = mx + b$ )	Unit 5 – Lesson 8: <i>Slope</i> pp. 154-157
8.G.18 Solve systems of equations graphically (only linear, integral solutions, $y = mx + b$ format, no vertical/horizontal lines)	Unit 5 – Lesson 8: <i>Slope</i> pp. 154-157
<b>Measurement Strand</b>	
<b><i>Students will determine what can be measured and how, using appropriate methods and formulas.</i></b>	
8.M.1 Solve equations/proportions to convert to equivalent measurements within metric and customary measurement systems	Unit 4 – Lesson 2: <i>Writing and Solving Proportions</i> pp. 108-110 Lesson 5: <i>Solving Percent Problems Using a Proportion</i> pp. 117-119 Lesson 6: <i>Using Proportions to Solve other Percent Problems</i> pp. 120-123