

Northpoint Horizons

Math Elevations[™] Correlated to the

Florida Next Generation Sunshine State Standards Mathematics and *Florida Math Connects Course 3*

Grade 8

Content Standard	<i>Math Connects Course 3</i> Planning Guide	<i>Math Elevations</i> [™] Teacher's Guide Examples/Lessons
BIG IDEA 1: <i>Analyze and represent linear functions, and solve linear equations and systems of linear equations.</i>		LC=Level C ME program LD=Level D ME program LF=Level F ME program LG=Level G ME program LH=Level H ME program
MA.8.A.1.1: Create and interpret tables, graphs, and models to represent, analyze, and solve problems related to linear equations, including analysis of domain, range, and the difference between discrete and continuous data.	2.1A: PSI-Make a Table, p. 92 2.1C: Ordered Pairs, p. 99 2.2A-D: Patterns, p. 105 2.3A-C: Relations and Functions, p. 123 3.2C: Model Linear Behavior, p. 185 3.3A: Systems of Equations, p. 188	5.4: LH, Relations and Functions, p. 141 5.6: LH, Graphing Linear Functions, p. 147 5.7: LH, Interpreting Linear Functions, p. 151
MA.8.A.1.2: Interpret the slope and the x- and y- intercepts when graphing a linear equation for a real-world problem.	3.1A-E: Slope, p. 155 3.2A-B: Intercepts, p. 175	5.8: LH, Slope, p. 154
MA.8.A.1.3: Use tables, graphs, and models to represent, analyze, and solve real-world problems related to systems of linear equations.	3.3B-D: Systems of Equations, p. 190	5.5: Two-Variable Equations, p. 144
MA.8.A.1.4: Identify the solution to a system of linear equations using graphs.	3.3C: Systems of Equations by Graphing, p. 191	5.5: LH, Two-Variable Equations, p. 144

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MA.8.A.1.5: Translate among verbal, tabular, graphical, and algebraic representations of linear functions.	2.1B: Variables and Expressions, p. 94 2.2A-D: Patterns, p. 105 2.3B-C: Functions, p. 124	4.3: LG, Writing and Evaluating Expressions, p. 106
MA.8.A.1.6: Compare the graphs of linear and non-linear functions for real-world situations.	2.3D: Linear and Nonlinear Functions, p. 136	5.4: LH, Relations and Functions, p. 141 5.6: LH, Graphing Linear Functions, p. 147 5.7: LH, Interpreting Linear Functions, p. 151
Big Idea 2: <i>Analyze two- and three-dimensional figures by using distance and angle.</i>		
MA.8.G.2.1: Use similar triangles to solve problems that include height and distances.	7.1A-E: Similar Triangles, p. 394 7.2E: Slope Triangles, p. 431 7.2F: Special Right Triangles, p. 432	7.1: LF, Triangles, p. 126-127 7.4: LF, Area of Triangles, p. 136-137 6.6: LH, Similarity and Dilations, p. 177
MA.8.G.2.2: Classify and determine the measure of angles, including angles created when parallel lines are cut by transversals.	6.1A-D: Angle Measure, p. 339 6.2A-B: Parallel Lines, p.352	6.1: LH, Angles, p. 160 6.2: LH, Angles in Parallel Lines Cut by a Transversal, p. 164
MA.8.G.2.3: Demonstrate that the sum of the angles in a triangle is 180-degrees and apply this fact to find unknown measure of angles and the	6.3A-E: Angle Relationships in Polygons, p. 360	6.4: LH, Sum of Angles in Polygons, p. 171

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sum of angles in polygons.		
MA.8.G.2.4: Validate and apply Pythagorean Theorem to find distances in real world situations or between points in the coordinate plane.	7.2A-D: The Pythagorean Theorem, p. 413	3.8: LH, Pythagorean Theorem, p. 98
Big Idea 3: <i>Analyze and summarize data sets.</i>		
MA.8.S.3.1: Select, organize and construct appropriate data displays, including box and whisker plots, scatter plots, and lines of best fit to convey information and make conjectures about possible relationships.	8.2A-D: Box-and-Whisker Plots, p. 461 8.3A-G: Scatter Plots, p. 495	8.4: LH, Scatter Plots, p. 225 8.5: LH, Box-and-Whiskers Plots, p. 229
MA.8.S.3.2: Determine and describe how changes in data values impact measures of central tendency.	8.1A-C: Analyze Data, p. 451	8.2: LH, Making Predictions, p. 219
Supporting Idea 4: Algebra		
MA.8.A.4.1: Solve literal equations for a specified variable.	9.1A: Literal Equations, p. 513	3.3: LH, Substitution Values for Variables in Formulas, p. 81
MA.8.A.4.2: Solve and graph one- and two-step inequalities in one variable.	4.1A-D: One-Step Equations, p. 214 4.2A-C: Two-Step Equations, p. 231 4.3A-C: One-Step Inequalities, p.	5.5: LF, Solving Equations, p. 98 4.6: LG, Solving One-Step Equations Using Addition and Subtraction, p. 115 4.7: LG, Solving One-Step Equations Using Multiplication and Division, p. 118

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	243 4.4A-B: Two-Step Inequalities, p. 262	4.8: LG, Solving and Graphing Inequalities, p. 121 5.1: LH, Solving Two-Step Equations, p. 132
Supporting Idea 5: Geometry and Measurement		
MA.8.G.5.1: Compare, contrast, and convert units of measure between different measurement systems (US customary or metric (SI)) and dimensions including temperature, area, volume, and derived units to solve problems.	9.1B-C: Convert Temperatures, p. 517 9.2A-C: Convert Units of Measure, p. 525	7.2: LC, Length (customary), p. 128 7.3: LC, Length (metric), p. 130 6.4: LD, Metric Measurement, p. 114
Supporting Idea 6: Number and Operations		
MA.8.A.6.1: Use exponents and scientific notation to write large and small numbers and vice versa and to solve problems.	5.1A: Powers and Exponents, p. 279 5.1D: PSI-Laws of Exponents, p. 294 5.2B-C: Scientific Notation, p. 301	1.2: LF, Understanding Exponents, p. 20-21 2.6: LH, Rules of Exponents, p. 62 2.7: LH, Negative and Zero Exponents, p. 65 2.8: LH, Scientific Notation, p. 68
MA.8.A.6.2: Make reasonable approximations of square roots and mathematical expressions that include	5.3B-D: Square Roots, p. 316	1.8: LH, Square Roots, p. 40

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square roots, and use them to estimate solutions to problems and to compare mathematical expressions involving real numbers and radical expressions.		
MA.8.A.6.3: Simplify real number expressions using the laws of exponents.	5.1B: Multiply and Divide Monomials, p. 285 5.2C: Laws of Exponents, p. 290 5.2A: Negative Exponents, p. 296	2.6: LH, Rules of Exponents, p. 62 2.7: LH, Negative and Zero Exponents, p. 65
MA.8.A.6.4: Perform operations on real numbers (including integer exponents, radicals, percents, scientific notation, absolute value, rational numbers and irrational numbers) using multi-step and real world problems.	1.1A-D: Rational Numbers, p. 28 1.2A-C: Percents, p. 50 1.3A-B: Apply Percents, p. 64 2.1B: Variables and Expressions, p. 94 5.1B: Multiply and Divide Monomials, p. 285 5.2C: Scientific Notation, p. 306 5.3A: Square Roots, p. 312 5.3C: Estimate Square Roots, p. 317	4.3: LG, Writing and Evaluating Expressions, p. 106 1.8: LH, Square Roots, p. 40 2.8: LH, Scientific Notation, p. 68