

8th Grade Overview

In Grade 8, instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

Mathematical Practices:

Mathematical Practices 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

[Detailed APH Document Math Common Core Grade 8](#)

Common Core (Basics)	Brl/Tactile Resources/Tools	Braille (UEB/Nemeth)	LV/Print Resources/Tools
The Number System ☐ Know that there are numbers that are not rational, and approximate them by rational numbers.	• Math Window • Manipulatives (be creative!) • Unit blocks, tens rods, • Number line • Specific/Descriptive language • Tactile graphics and SDI • Cranmer Abacus • APH Nemeth Tutorial • Pearson Accessibility - Nemeth • DESMOS Calculators • Application of content knowledge is best demonstrated by	Nemeth Focused Lessons Nemeth Code Used in Grades 2-6 Nemeth Cheat Sheet Nemeth Code Used in Middle School Grades Nemeth Symbol Library Nemeth: • Repeating Decimal Number	(Based on FVA info and IEP accommodations) • Abacus • Descriptive language • Accommodated materials • Manipulatives (be creative!) • Bold lined/tactile graphics • Magnification • Bold lined paper • Bold lined graph paper

Common Core (Basics)	Brl/Tactile Resources/Tools	Braille (UEB/Nemeth)	LV/Print Resources/Tools
	using Nemeth Braille Code and a Braille Writer. APH Resources: • Number Line Device – 1-03480-01		
Expressions and Equations ☐ Work with radicals and integer exponents. ☐ Understand the connections between proportional relationships, lines, and linear equations. ☐ Analyze and solve linear equations and pairs of simultaneous linear equations.	APH Resources:: • Orion TI-84 Plus Talking Graphing Calculator • Graph Paper (assorted Low Relief and Bold-line available) • Graphic Aid for Mathematics – 1-00460-01 • Tactile Algebra Tiles – 1-08410-00 • DRAFTSMAN Tactile Drawing Board – 1-08857-00 • Quick-Draw Paper- 1-04960-00	Nemeth: • Exponents • Radical Signs	
Functions	APH Resources:		

Common Core (Basics)	Brl/Tactile Resources/Tools	Braille (UEB/Nemeth)	LV/Print Resources/Tools
☐ Define, evaluate, and compare functions. ☐ Use functions to model relationships between quantities.	• DRAFTSMAN Tactile Drawing Board – 1-08857-00 • Quick-Draw Paper- 1-04960-00 • Orion TI-84 Plus Talking Graphing Calculator • Graph Paper (assorted Low Relief and Bold-line available) • Graphic Aid for Mathematics – 1-00460-01		
Geometry ☐ Understand congruence and similarity using physical models, transparencies, or geometry software. ☐ Understand and apply the Pythagorean Theorem. ☐ Solve real-world and mathematical problems involving volume of cylinders, cones and	APH Resources: • Draw2Measure Protractor App • Braille/Large Print Protractor – 1-04115-00 • English Measurement Ruler – 1-03070-00 • Flexible Rulers Flexible Rulers (Braille/Large Print), 18-Inch – 1-03050-00;	Nemeth: • Geometry Signs of Comparison	• Large Print Protractor (4-pack) – 1-04116-00

Common Core (Basics)	Brl/Tactile Resources/Tools	Braille (UEB/Nemeth)	LV/Print Resources/Tools
spheres.	30-Centimeter – 1-03031-00 • Geometry Tactile Graphics Kit – 1-08841-00 • Graph Paper (assorted Low Relief and Bold-line available) • Graphic Aid for Mathematics – 1-00460-01 • Orion TI-84 Plus Talking Graphing Calculator • Tactile Protractor (4-pack) – 1-04117-00		
Statistics and Probability ☐ Investigate patterns of association in bivariate data.	APH Resources: • Graph Paper (assorted Low Relief and Bold-line available) • Graphic Aid for Mathematics – 1-00460-01 • Orion TI-84 Plus Talking Graphing Calculator		