Georgia Mathematics

Grade 8 - Learning Progressions

Adopted 2021

5-12 Learning Progressions

Numerical Reasoning

Numbers (rational numbers and irrational numbers)

1. All rational numbers 8.LP5.1.1
2. Scientific notation 8.LP5.1.2
3. Numerical expressions with integer exponents 8.LP5.1.3
4. Use appropriate counting strategies to approximate rational and irrational numbers (radicals) on a number line 8.LP5.1.4

Computational Fluency

1. Operations with scientific notation 8.LP5.2.1
2. Scientific notation in real situations seen in everyday life 8.LP5.2.2
3. Expressions with integer exponents 8.LP5.2.3

Comparisons

1. Rational and irrational numbers (radicals) 8.LP5.3.1
2. Compare proportional relationships presented in different ways 8.LP5.3.2

Patterning & Algebraic Reasoning

Patterns

1. Integer exponents `8.LP6.1.1`
2. Perfect squares and perfect cubes `8.LP6.1.2`

Expressions

1. Expressions with integer exponents `8.LP6.2.1`
2. Linear expressions `8.LP6.2.2`
3. Operations with algebraic expressions `8.LP6.2.3`

Variable Equations & Inequalities

1. Analyze and solve linear equations and inequalities `8.LP6.3.1`

Ratios & Rates

1. Interpret unit rate as the slope of a graph `8.LP6.4.1`

Graphing

1. Linear functions `8.LP6.6.1`
2. Comparing linear and non-linear functions `8.LP6.6.2`
3. Systems of linear equations (including parallel and perpendicular) `8.LP6.6.3`
4. Linear inequalities `8.LP6.6.4`
5. Analyze data distributions `8.LP6.6.5`

Functional & Graphical Reasoning

Function Families

1. Linear functions `8.LP7.1.1`
2. Line of best fit `8.LP7.1.2`

Geometric & Spatial Reasoning

Shapes & Properties

1. Introduction to Pythagorean Theorem and the converse `8.LP8.1.1`

Geometric Measurement

1. Pythagorean Theorem to determine distance between two points `8.LP8.2.1`
2. Volume of cones, cylinders, and spheres `8.LP8.2.2`