

# 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](#)

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## 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

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## Functional & Graphical Reasoning

### Function Families

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

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## 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