

Pre-Algebra

Scope & Sequence

★ Unit 1 | Number and Operation Sense

- Topic 1: Square & Cube Roots (8.NOS.B.4.b)
- Topic 2: Equations with Square & Cube Roots (8.NOS.B.4.a)
- Topic 3: Rational & Irrational Numbers (8.NOS.A.1)
- Topic 4: Approximating Radicals & Comparing Numbers (8.NOS.A.2)
- Topic 5: Product Property & Power of a Power Property of Exponents (8.NOS.B.3)
- Topic 6: Quotient Property & Zero Property of Exponents (8.NOS.B.3)
- Topic 7: Negative Exponent Property (8.NOS.B.3)
- Topic 8: Mixed Review (8.NOS.B.3)
- Topic 9: Scientific Notation (8.NOS.B.5.a/b)

★ Unit 2 | Solving Equations & Inequalities

- Topic 1: Solving Two-Step Equations (8.AT.B.3.b)
- Topic 2: Solving Multi-Step Equations (8.AT.B.3.b)
- Topic 3: Solving Equations with Variables on Both Sides (8.AT.B.3.a/b)
- Topic 4: Solving Multi-Step Inequalities (8.AT.B.4.a/b)

★ Unit 3 | Geometry

- Topic 1: Angle Relationships (8.GR.A.1)
- Topic 2: Constructing Triangles (8.GR.A.2)
- Topic 3: Interior Angles of Triangles (8.GR.A.3)
- Topic 4: Exterior Angles of Triangles (8.GR.A.3)
- Topic 5: Discover & Understand the Pythagorean Theorem (8.GR.B.4.a)
- Topic 6: Applying the Pythagorean Theorem – 2D (8.GR.B.5.a)
- Topic 7: Understand the Converse of the Pythagorean Theorem & Triangle Inequality Theorem (8.GR.B.4.b)
- Topic 8: Applying the Pythagorean Theorem - Distance on the Coordinate Plane (8.GR.B.5.b)
- Topic 9: Applying the Pythagorean Theorem – 3D (8.GR.B.5.a)

★ Unit 4 | Rate of Change & Introduction to Linear Functions

- Topic 1: Graphing Proportional Relationships (8.AT.A.1.a, 8.AT.A.2.b)
- Topic 2: Comparing Proportional Relationships (8.AT.A.1.b)
- Topic 3: Understanding Rate of Change (Slope) (8.AT.A.2.a/b)
- Topic 4: Understanding Y-Intercepts (supports 8.AT.C.7)

Topic 5: Identifying Functions (8.AT.C.6)

Topic 6: Determining Linear or Non-Linear (8.AT.C.8)

Topic 7: Linear Functions & Slope-Intercept Form (8.AT.D.9.a/b)

Topic 8: Comparing Properties of Linear Functions (8.AT.C.7)

Topic 9: Analyzing Graphs of Functions (8.AT.D.11)

★ Unit 5 | Modeling with Linear Functions

Topic 1: Writing Linear Functions from a Graph (8.AT.D.10.a/b)

Topic 2: Writing Linear Functions from a Table (8.AT.D.10.a/b)

Topic 3: Writing Linear Functions from Two Input-Output Pairs (8.AT.D.10.a/b)

Topic 4: Bivariate Data & Scatter Plots (8.DS.B.2, 8.DS.A.1.a/b)

Topic 5: Analyzing Linear Associations (8.DS.B.3)

Topic 6: Using Linear Models to Make Predictions (8.DS.B.4)

★ Unit 6 | Linear Systems

Topic 1: Systems Introduction & Solutions to Systems (8.AT.B.5.a)

Topic 2: Solving Systems by Graphing (8.AT.B.5.b/d)

Topic 3: Solving Systems by Substitution (8.AT.B.5.b/d)

Topic 4: Number of Solutions to a System (8.AT.B.5.c)

Topic 5: Mixed Review (Choosing the Best Method) (8.AT.B.5.b/d)

★ Unit 7 | Probability

Topic 1: Two-Way Frequency Tables (8.DS.C.5)

Topic 2: Determine Outcomes of Compound Events (8.DS.C.6.a)

Topic 3: Probability of Compound Events (8.DS.C.6.b)

Topic 4: Simulate Compound Events (8.DS.C.6.b)