



Math Connects

Concepts, Skills, and Problem Solving

Course 3

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Lesson	Grade Level Expectations
Unit 1 Number and Operations: Rational and Real Numbers	
Chapter 1 Algebra: Integers	
1-1 A Plan for Problem Solving	Algebraic Relationships 1B, 1C
1-2 Variables, Expressions, and Properties	Numbers & Operations 2C Algebraic Relationships 2B
1-3 Integers and Absolute Value	Numbers & Operations 2C
Explore 1-4 Algebra Lab: Adding Integers	There are no state-mandated GLEs for this topic.
1-4 Adding Integers	Numbers & Operations 2C Algebraic Relationships 2B
1-5 Subtracting Integers	There are no state-mandated GLEs for this topic.
1-6 Multiplying and Dividing Integers	Numbers & Operations 2C
1-7 Writing Equations	Algebraic Relationships 2B
1-8 PSI: Work Backward	There are no state-mandated GLEs for this topic.

Lesson	Grade Level Expectations
1-9 Solving Addition and Subtraction Equations	Numbers & Operations 2C Algebraic Relationships 2B
1-10 Solving Multiplication and Division Equations	Numbers & Operations 2C Algebraic Relationships 2B
Chapter 2 Algebra: Rational Numbers	
2-1 Rational Numbers	Numbers & Operations 1B, 1C
2-2 Comparing and Ordering Rational Numbers	Numbers & Operations 1A
2-3 Multiplying Positive and Negative Fractions	Numbers & Operations 1B
2-4 Dividing Positive and Negative Fractions	Numbers & Operations 1B Algebraic Relationships 2B
2-5 Adding and Subtracting Like Fractions	Numbers & Operations 1B
2-6 Adding and Subtracting Unlike Fractions	Numbers & Operations 1B
2-7 Solving Equations with Rational Numbers	Algebraic Relationships 2B
2-8 PSI: Look for a Pattern	Algebraic Relationships 1B, 1C
2-9 Powers and Exponents	Algebraic Relationships B, 1C Geometric & Spatial Relationships 1A
2-10 Scientific Notation	Numbers & Operations 1C
Chapter 3 Real Numbers and the Pythagorean Theorem	
3-1 Square Roots	Numbers & Operations 1A
3-2 Estimating Square Roots	There are no state-mandated GLEs for this topic.

Lesson	Grade Level Expectations
3-3 PSI: Use a Venn Diagram	There are no state-mandated GLEs for this topic.
3-4 The Real Number System	There are no state-mandated GLEs for this topic.
Explore 3-5 Geometry Lab: The Pythagorean Theorem	Geometric & Spatial Relationships 1A
3-5 The Pythagorean Theorem	Geometric & Spatial Relationships 2A Measurement 2D
3-6 Using the Pythagorean Theorem	Geometric & Spatial Relationships 1A, 2A Measurement 2D
Extend 3-6 Geometry Lab: Graphing Irrational Numbers	There are no state-mandated GLEs for this topic.
3-7 Geometry: Distance on the Coordinate Plane	Measurement 2D
Unit 2 Patterns, Relationships, and Algebraic Thinking	
Chapter 4 Proportions and Similarity	
4-1 Ratios and Rates	There are no state-mandated GLEs for this topic.
4-2 Proportional and Nonproportional Relationships	There are no state-mandated GLEs for this topic.
4-3 Rate of Change	There are no state-mandated GLEs for this topic.
4-4 Constant Rate of Change	Algebraic Relationships 3A Measurement 2D
4-5 Solving Proportions	Algebraic Relationships 2B Measurement 2D
4-6 PSI: Draw a Diagram	Algebraic Relationships 3A
4-7 Similar Polygons	There are no state-mandated GLEs for this topic.
Extend 4-7 Geometry Lab: The Golden Rectangle	There are no state-mandated GLEs for this topic.
4-8 Dilations	Geometric & Spatial Relationships 3B
Extend 4-8 Spreadsheet Lab: Dilations	Geometric & Spatial Relationships 3B

Lesson	Grade Level Expectations
4-9 Indirect Measurement	Geometric & Spatial Relationships 3B
4-10 Scale Drawings and Models	Geometric & Spatial Relationships 3B Measurement 2D
Chapter 5 Percent	
5-1 Ratios and Percents	Numbers & Operations 1C
5-2 Comparing Fractions, Decimals, and Percents	Numbers & Operations 1A, 1B, 1C
5-3 Algebra: The Percent Proportion	Numbers & Operations 1A, 1B
5-4 Finding Percents Mentally	Numbers & Operations 1B, 1C
5-5 PSI: Reasonable Answers	There are no state-mandated GLEs for this topic.
5-6 Percent and Estimation	There are no state-mandated GLEs for this topic.
5-7 Algebra: The Percent Equation	There are no state-mandated GLEs for this topic.
5-8 Percent of Change	There are no state-mandated GLEs for this topic.
5-9 Simple Interest	There are no state-mandated GLEs for this topic.
Extend 5-9 Spreadsheet Lab: Compound Interest	There are no state-mandated GLEs for this topic.
Unit 3 Geometry and Measurement	
Chapter 6 Geometry and Spatial Reasoning	
6-1 Line and Angle Relationships	Measurement 2B
Extend 6-1 Geometry Lab: Triangles	Geometric & Spatial Relationships 1A Measurement 2B
6-2 PSI: Use Logical Reasoning	Geometric & Spatial Relationships 1A Measurement 2B

Lesson	Grade Level Expectations
6-3 Polygons and Angles	Geometric & Spatial Relationships 1A, 4B Measurement 2B
6-4 Congruent Polygons	Geometric & Spatial Relationships 1A
Extend 6-4 Geometry Lab: Investigating Congruent Triangles	Geometric & Spatial Relationships 1A
6-5 Symmetry	Geometric & Spatial Relationships 3C
6-6 Reflections	Geometric & Spatial Relationships 3A
6-7 Translations	Geometric & Spatial Relationships 3A
Chapter 7 Measurement: Area and Volume	
7-1 Circumference and Area of Circles	Geometric & Spatial Relationships 1A
Extend 7-1: Geometry Lab: Investigating Arcs and Angles	There are no state-mandated GLEs for this topic.
7-2 PSI: Solve a Simpler Problem	There are no state-mandated GLEs for this topic.
Explore 7-3 Measurement Lab: Area of Irregular Figures	There are no state-mandated GLEs for this topic.
7-3 Area of Composite Figures	Geometric & Spatial Relationships 1A
7-4 Three-Dimensional Figures	Geometric & Spatial Relationships 1A, 4A, 4B
7-5 Volume of Prisms and Cylinders	Geometric & Spatial Relationships 1A, 4A
7-6 Volume of Pyramids and Cones	Geometric & Spatial Relationships 4A, 4B
Explore 7-7 Measurement Lab: Surface Area of Cylinders	Geometric & Spatial Relationships 4B
7-7 Surface Area of Prisms and Cylinders	Geometric & Spatial Relationships 4A, 4B
Extend 7-7 Measurement Lab: Net of a Cone	Geometric & Spatial Relationships 4B

Lesson	Grade Level Expectations
7-8 Surface Area of Pyramids	Geometric & Spatial Relationships 4A, 4B
Explore 7-9 Spreadsheet Lab: Similar Solids	Geometric & Spatial Relationships 1A, 4B
7-9 Similar Solids	Geometric & Spatial Relationships 1A
Unit 4 Algebraic Thinking: Linear and Nonlinear Functions	
Chapter 8 Algebra: More Equations and Inequalities	
8-1 Simplifying Algebraic Expressions	There are no state-mandated GLEs for this topic.
8-2 Solving Two-Step Equations	Algebraic Relationships 3A
8-3 Writing Two-Step Equations	Algebraic Relationships 3A
Explore 8-4 Algebra Lab: Equations with Variables on Each Side	Algebraic Relationships 3A
8-4 Solving Equations with Variables on Each Side	There are no state-mandated GLEs for this topic.
8-5 PSI: Guess and Check	There are no state-mandated GLEs for this topic.
8-6 Inequalities	Algebraic Relationships 3A
8-7 Solving Inequalities by Adding or Subtracting	There are no state-mandated GLEs for this topic.
8-8 Solving Inequalities by Multiplying or Dividing	There are no state-mandated GLEs for this topic.
Chapter 9 Algebra: Linear Functions	
9-1 Sequences	Algebraic Relationships 3A 1B, 1C
9-2 Functions	Algebraic Relationships 3A, 4A
Extend 9-2 Algebra Lab: Relations and Functions	There are no state-mandated GLEs for this topic.
9-3 Representing Linear Functions	Algebraic Relationships 1D, 2A, 3A, 4A
9-4 Slope	Algebraic Relationships 3A 2A
9-5 Direct Variation	Algebraic Relationships 3A2A, 4A

Lesson	Grade Level Expectations
Extend 9-5 Geometry Lab: Slope Triangles	Algebraic Relationships 4A
9-6 Slope Intercept Form	Algebraic Relationships 2A, 4A
Extend 9-6 Graphing Calculator Lab: Modeling Linear Behavior	Algebraic Relationships 1D, 4A
9-7 Systems of Equations	Algebraic Relationships 2A
9-8 PSI: Use a Graph	Data & Probability 1C, 3A
9-9 Scatter Plots	Data & Probability 1C, 3A
Extend 9-9 Graphing Calculator Lab: Scatter Plots	Data & Probability 1C
Chapter 10 Algebra: Nonlinear Functions and Polynomials	
10-1 Linear and Nonlinear Functions	Algebraic Relationships 1D
10-2 Graphing Quadratic Functions	Algebraic Relationships 1D
10-3 PSI: Make a Model	There are no state-mandated GLEs for this topic.
10-4 Graphing Cubic Functions	Algebraic Relationships 1D
Extend 10-4 Graphing Calculator Lab: Families of Nonlinear Functions	Algebraic Relationships 1D
10-5 Multiplying Monomials	There are no state-mandated GLEs for this topic.
10-6 Dividing Monomials	There are no state-mandated GLEs for this topic.
10-7 Powers of Monomials	There are no state-mandated GLEs for this topic.
10-8 Roots of Monomials	There are no state-mandated GLEs for this topic.
Unit 5 Statistics, Data Analysis, and Probability	
Chapter 11 Statistics	
11-1 PSI: Make a Table	There are no state-mandated GLEs for this topic.
11-2 Histograms	There are no state-mandated GLEs for this topic.
Extend 11-2 Graphing Calculator Lab: Histograms	There are no state-mandated GLEs for this topic.
11-3 Circle Graphs	There are no state-mandated GLEs for this topic.

Lesson	Grade Level Expectations
Extend 11-3 Spreadsheet Lab: Line, Bar, and Circle Graphs	There are no state-mandated GLEs for this topic.
11-4 Measures of Central Tendency and Range	Data & Probability 2A
Extend 11-4 Spreadsheet Lab: Mean, Median, and Mode	Data & Probability 2A
11-5 Measures of Variation	Data & Probability 2A
11-6 Box-and-Whisker Plots	Data & Probability 1C, 2B
Extend 11-6 Graphing Calculator Lab: Box-and Whisker Plots	Data & Probability 1C
11-7 Stem-and-Leaf Plots	Data & Probability 1C
11-8 Select an Appropriate Display	Data & Probability 1C, 2B
Chapter 12 Probability	
12-1 Counting Outcomes	There are no state-mandated GLEs for this topic.
12-2 Probability of Compound Events	There are no state-mandated GLEs for this topic.
12-3 Experimental and Theoretical Probability	There are no state-mandated GLEs for this topic.
Extend 12-3 Probability Lab: Fair Games	There are no state-mandated GLEs for this topic.
12-4 PSI: Act It Out	There are no state-mandated GLEs for this topic.
12-5 Using Sampling to Predict	There are no state-mandated GLEs for this topic.
Looking Ahead 1 Polynomials	There are no state-mandated GLEs for this topic.
Looking Ahead 2 Adding Polynomials	There are no state-mandated GLEs for this topic.
Looking Ahead 3 Subtracting Polynomials	There are no state-mandated GLEs for this topic.
Looking Ahead 6 Different Forms of Linear Equations	There are no state-mandated GLEs for this topic.