G7 Common Core Math (CCSS7) Content

Module 1: Ratios and Proportional Relationships

Topic A: Proportional Relationships
  Lesson 1: An Experience in Relationships as Measuring Rate
  Lesson 2: Proportional Relationships
  Lessons 3–4: Identifying Proportional and Non-Proportional Relationships in Tables
  Lessons 5–6: Identifying Proportional and Non-Proportional Relationships in Graphs

Topic B: Unit Rate and the Constant of Proportionality
  Lesson 7: Unit Rate as the Constant of Proportionality
  Lessons 8–9: Representing Proportional Relationships with Equations
  Lesson 10: Interpreting Graphs of Proportional Relationships
Mid-Module Assessment
Topic C: Ratios and Rates Involving Fractions
  Lessons 11–12: Ratios of Fractions and Their Unit Rates
  Lesson 13: Finding Equivalent Ratios Given the Total Quantity
  Lesson 14: Multi-Step Ratio Problems
  Lesson 15: Equations of Graphs of Proportional Relationships Involving Fractions

Topic D: Ratios of Scale Drawings
  Lesson 16: Relating Scale Drawings to Ratios and Rates
  Lesson 17: The Unit Rate as the Scale Factor
  Lesson 18: Computing Actual Lengths from a Scale Drawing
  Lesson 19: Computing Actual Areas from a Scale Drawing
  Lesson 20: An Exercise in Creating a Scale Drawing
  Lessons 21–22: An Exercise in Changing Scales
End-of-Module Assessment

Module 2: Rational Numbers

Topic A: Addition and Subtraction of Integers and Rational Numbers
  Lesson 1: Opposite Quantities Combine to Make Zero
  Lesson 2: Using the Number Line to Model the Addition of Integers
  Lesson 3: Understanding Addition of Integers
  Lesson 4: Efficiently Adding Integers and Other Rational Numbers
  Lesson 5: Understanding Subtraction of Integers and Other Rational Numbers
  Lesson 6: The Distance Between Two Rational Numbers
  Lesson 7: Addition and Subtraction of Rational Numbers
  Lessons 8–9: Applying the Properties of Operations to Add and Subtract Rational Numbers

Topic B: Multiplication and Division of Integers and Rational Numbers
  Lesson 10: Understanding Multiplication of Integers
  Lesson 11: Develop Rules for Multiplying Signed Numbers
  Lesson 12: Division of Integers
  Lesson 13: Converting Between Fractions and Decimals Using Equivalent Fractions

Lesson 14: Converting Rational Numbers to Decimals Using Long Division
Lesson 15: Multiplication and Division of Rational Numbers
Lesson 16: Applying the Properties of Operations to Multiply and Divide Rational Numbers
Mid-Module Assessment
  Topic C: Applying Operations with Rational Numbers to Expressions and Equations
  Lesson 17: Comparing Tape Diagram Solutions to Algebraic Solutions
  Lessons 18–19: Writing, Evaluating, and Finding Equivalent Expressions with Rational Numbers
  Lesson 20: Investments—Performing Operations with Rational Numbers
  Lesson 21: If-Then Moves with Integer Number Cards
  Lessons 22–23: Solving Equations Using Algebra
End-of-Module Assessment

Module 3: Expressions and Equations
Topic A: Use Properties of Operations to Generate Equivalent Expressions
  Lessons 1–2: Generating Equivalent Expressions
  Lessons 3–4: Writing Products as Sums and Sums as Products
  Lesson 5: Using the Identity and Inverse to Write Equivalent Expressions
  Lesson 6: Collecting Rational Number Like Terms

Topic B: Solve Problems Using Expressions, Equations, and Inequalities
  Lesson 7: Understanding Equations
  Lessons 8–9: Using If-Then Moves in Solving Equations
  Lessons 10–11: Angle Problems and Solving Equations
  Lesson 12: Properties of Inequalities
  Lesson 13: Inequalities
  Lesson 14: Solving Inequalities
  Lesson 15: Graphing Solutions to Inequalities
Mid-Module Assessment
Topic C: Use Equations and Inequalities to Solve Geometry Problems
  Lesson 16: The Most Famous Ratio of All
  Lesson 17: The Area of a Circle
  Lesson 18: More Problems on Area and Circumference
  Lesson 19: Unknown Area Problems on the Coordinate Plane
  Lesson 20: Composite Area Problems
  Lessons 21–22: Surface Area
  Lessons 23–24: The Volume of a Right Prism
  Lessons 25–26: Volume and Surface Area
End-of-Module Assessment

Module 4: Percent and Proportional Relationships

Topic A: Finding the Whole
  Lesson 1: Percent
  Lesson 2: Part of a Whole as a Percent

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Lesson 3: Comparing Quantities with Percent
Lesson 4: Percent Increase and Decrease
Lesson 5: Finding One Hundred Percent Given Another Percent
Lesson 6: Fluency with Percents

Topic B: Percent Problems Including More Than One Whole
Lesson 7: Markup and Markdown Problems
Lesson 8: Percent Error Problems
Lesson 9: Problem Solving When the Percent Changes
Lesson 10: Simple Interest
Lesson 11: Tax, Commissions, Fees, and Other Real-World Percent Applications
Mid-Module Assessment

Topic C: Scale Drawings
Lesson 12: The Scale Factor as a Percent for a Scale Drawing
Lesson 13: Changing Scales
Lesson 14: Computing Actual Lengths from a Scale Drawing
Lesson 15: Solving Area Problems Using Scale Drawings
Topic D: Population, Mixture, and Counting Problems Involving Percents
Lesson 16: Population Problems
Lesson 17: Mixture Problems
Lesson 18: Counting Problems

Module 5: Statistics and Probability

Topic A: Calculating and Interpreting Probabilities
Lesson 1: Chance Experiments
Lesson 2: Estimating Probabilities by Collecting Data
Lesson 3: Chance Experiments with Equally Likely Outcomes
Lesson 4: Calculating Probabilities for Chance Experiments with Equally Likely Outcomes
Lesson 5: Chance Experiments with Outcomes that Are Not Equally Likely
Lesson 6: Using Tree Diagrams to Represent a Sample Space and to Calculate Probabilities
Lesson 7: Calculating Probabilities of Compound Events

Topic B: Estimating Probabilities
Lesson 8: The Difference Between Theoretical Probabilities and Estimated Probabilities
Lesson 9: Comparing Estimated Probabilities to Probabilities Predicted by a Model
Lessons 10–11: Using Simulation to Estimate a Probability
Lesson 12: Using Probability to Make Decisions
Mid-Module Assessment

Topic C: Random Sampling and Estimated Population Characteristics
Lesson 13: Populations, Samples, and Generalizing from a Sample to a Population
Lesson 14: Selecting a Sample

Lesson 15: Random Sampling
Lesson 16: Methods for Selecting a Random Sample
Lesson 17: Sampling Variability
Lesson 18: Estimating a Population Mean
Lesson 19: Understanding Variability when Estimating a Population Proportion
Lesson 20: Estimating a Population Proportion

Topic D: Comparing Populations
Lesson 21: Why Worry About Sampling Variability?
Lessons 22–23: Using Sample Data to Decide if Two Population Means Are Different
End-of-Module Assessment

Module 6: Geometry

Topic A: Unknown Angles
Lesson 1: Complementary and Supplementary Angles
Lessons 2–4: Solve for Unknown Angles using Equations

Topic B: Constructing Triangles
Lesson 5: Unique Triangles
Lesson 6: Drawing Geometric Shapes
Lesson 7: Drawing Parallelograms
Lesson 8: Drawing Triangles
Lesson 9: Conditions for a Unique Triangle—Three Sides and Two Sides and the Included Angle
Lesson 10: Conditions for a Unique Triangle—Two Angles and a Given Side
Lesson 11: Conditions on Measurements that Determine a Triangle
Lesson 12: Unique Triangles—Two Sides and a Non-Included Angle
Lessons 13–14: Checking for Identical Triangles
Lesson 15: Using Unique Triangles to Solve Real-World and Mathematical Problems
Mid-Module Assessment

Topic C: Slicing Solids
Lessons 16: Slicing a Right Rectangular Prism with a Plane
Lesson 17: Slicing a Right Rectangular Pyramid with a Plane
Lesson 18: Slicing on an Angle
Lesson 19: Understanding Three-Dimensional Figures
Topic D: Problems Involving Area and Surface Area
Lesson 20: Real-World Area Problems
Lesson 21: Mathematical Area Problems
Lesson 22: Area Problems with Circular Regions
Lessons 23–24: Surface Area
Topic E: Problems Involving Volume
Lesson 25: Volume of Right Prisms
Lesson 26: Volume of Composite Three-Dimensional Objects
Lesson 27: Real-World Volume Problems
End-of-Module Assessment