

PROGRAM OVERVIEW

Table of Contents for Instructional Units

Unit 1: Transformations

Unit 1 Resources

- Lesson 1.1: Proving the Vertical Angles Theorem (G–CO.9)
- Lesson 1.2: Proving Theorems About Angles in Parallel Lines Cut by a Transversal (G–CO.9)
- Lesson 1.3: Proving the Interior Angle Sum Theorem (G–CO.10)
- Lesson 1.4: Proving Theorems About Isosceles Triangles (G–CO.10)
- Lesson 1.5: Proving the Midsegment of a Triangle (G–CO.10)
- Lesson 1.6: Function Notation and Evaluating Functions (F–IF.2)
- Lesson 1.7: Translations on the Plane (G–CO.2, G–CO.4, G–CO.5)
- Lesson 1.8: Reflections on the Plane (G–CO.2, G–CO.4, G–CO.5)
- Lesson 1.9: Rotations on the Plane (G–CO.2, G–CO.4, G–CO.5)
- Lesson 1.10: Applying Lines of Symmetry (G–CO.3)
- Lesson 1.11: Dilations on the Plane (G–SRT.1a)
- Lesson 1.12: Defining Congruence in Terms of Rigid Motions (G–CO.6)
- Lesson 1.13: Transformations and Rigid Motions (G–CO.6)
- Lesson 1.14: Perpendicular Bisectors and Angle Bisectors (G–CO.9)
- Lesson 1.15: Triangle Congruency (G–CO.7)
- Lesson 1.16: Explaining ASA, SAS, and SSS (G–CO.8)

Conceptual Tasks

- Triangulating a Waterspout, Parts 1 and 2 (G–CO.9)
- String Games, Parts 1 and 2 (G–CO.10)
- The Transforming Key, Parts 1 and 2 (G–CO.5)
- Transformation Tests, Parts 1 and 2 (G–CO.6)
- Decoration Dilemma, Parts 1 and 2 (G–CO.7)

Station Activities

- Set 1: Parallel Lines and Transversals (G–CO.9)
- Set 2: Corresponding Parts, Transformations, and Proof (G–CO.2, G–CO.5, G–CO.6, G–CO.7, G–CO.8)
- Set 3: Rotations and Reflections (G–CO.3, G–CO.4, G–CO.5)

Mid-Unit Assessment

End-of-Unit Assessment

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Unit 2: Graphing Quadratic Functions

Unit 2 Resources

- Lesson 2.1: Identifying the Domain and Range of a Quadratic Function (F–IF.4*)
- Lesson 2.2: Identifying Terms, Factors, and Coefficients (A–SSE.1a*)
- Lesson 2.3: Interpreting Complicated Expressions (A–SSE.1b*)
- Lesson 2.4: Quadratic Modeling (A–CED.2*, F–BF.1*)
- Lesson 2.5: Interpreting Key Features of Quadratic Functions (F–IF.4*)
- Lesson 2.6: Interpreting Various Forms of Quadratic Functions (F–IF.8)
- Lesson 2.7: Comparing Properties of Quadratic Functions Given in Different Forms (F–IF.9)
- Lesson 2.8: Replacing $f(x)$ with $f(x) + k$ and $f(x + k)$ (F–BF.3)
- Lesson 2.9: Replacing $f(x)$ with $k \cdot f(x)$ and $f(k \cdot x)$ (F–BF.3)
- Lesson 2.10: Interpreting Quadratic Functions (F–IF.4*)
- Lesson 2.11: Quadratic Regression (A–CED.2*)

Conceptual Tasks

- Firework Celebration, Parts 1 and 2 (F–IF.4*)
- Production Profit, Parts 1 and 2 (F–IF.7a*)
- Coffee Compensation, Parts 1 and 2 (F–BF.1a*)
- This Curve You Can Change, Parts 1 and 2 (F–BF.3)

Station Activities

- Set 1: Graphing Quadratic Equations (F–IF.7*)
- Set 2: Quadratic Transformations in Vertex Form (F–IF.7*, F–IF.8*, F–BF.3)

Mid-Unit Assessment

End-of-Unit Assessment

Unit 3: Solving Quadratic Equations

Unit 3 Resources

- Lesson 3.1: Rational and Irrational Numbers and Their Properties (N–RN.3)
- Lesson 3.2: Adding and Subtracting Polynomials (A–APR.1)
- Lesson 3.3: Multiplying Polynomials (A–APR.1)
- Lesson 3.4: Factoring (A–REI.4b)
- Lesson 3.5: Simplifying Radicals with Numbers (N–RN.2)
- Lesson 3.6: Defining Complex Numbers, i , and i^2 (N–CN.1)

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Lesson 3.7: Solving Quadratics by Completing the Square (A–REI.4a)

Lesson 3.8: Applying the Quadratic Formula (A–REI.4b)

Lesson 3.9: Solving Systems Algebraically (A–REI.7)

Lesson 3.10: Solving Systems Graphically (A–REI.7)

Conceptual Tasks

Rational Decisions, Parts 1 and 2 (N–RN.1)

Debating Polynomials, Parts 1 and 2 (A–APR.1)

Give Me an Operator, Parts 1 and 2 (N–CN.1)

A Tale of Two Solutions, Parts 1 and 2 (A–REI.7)

Station Activities

Set 1: Operations with Complex Numbers (N–CN.1)

Set 2: Operations with Polynomials (A–APR.1)

Set 3: Factoring (A–SSE.3*)

Set 4: Solving Quadratics (A–REI.4)

Mid-Unit Assessment

End-of-Unit Assessment

Unit 4: Square Root and Inverse Variation Functions

Unit 4 Resources

Lesson 4.1: Evaluating Negative Exponents (N–RN.2)

Lesson 4.2: Working with Radicals and Properties of Real Numbers (N–RN.1, N–RN.2)

Lesson 4.3: Operating with Rational Exponents and Converting with Radicals (N–RN.1, N–RN.2)

Lesson 4.4: Solving Radical Equations (A–REI.2)

Lesson 4.5: Inverse Variation (F–BF.1*, A–REI.2, A–REI.11*)

Lesson 4.6: Radical Functions (F–IF.7*, F–IF.9, F–BF.3)

Lesson 4.7: Inverse Variation Functions (F–IF.4*, F–IF.7*, F–IF.9)

Conceptual Task

Under Pressure, Parts 1 and 2 (F–BF.1*, A–REI.2, A–REI.11*)

Mid-Unit Assessment

End-of-Unit Assessment

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Unit 5: Similarity, Right Triangles, and Congruence

Unit 5 Resources

Lesson 5.1: Defining Similarity (G–SRT.2)

Lesson 5.2: Applying Similarity Using the Angle-Angle (AA) Criterion (G–SRT.3)

Lesson 5.3: Proving Triangle Similarity Using Side-Angle-Side (SAS) and Side-Side-Side (SSS) Similarity (G–SRT.4)

Lesson 5.4: Working with Ratio Segments (G–SRT.4)

Lesson 5.5: Proving the Pythagorean Theorem Using Similarity (G–SRT.4)

Lesson 5.6: Special Right Triangles (G–SRT.12)

Lesson 5.7: Defining Trigonometric Ratios (G–SRT.6)

Lesson 5.8: Calculating Sine, Cosine, and Tangent (G–SRT.8*)

Lesson 5.9: Applying the Pythagorean Theorem (G–SRT.8*)

Lesson 5.10: Problem Solving with the Pythagorean Theorem and Trigonometry (G–SRT.8*)

Conceptual Task

Similarity Investigation, Parts 1 and 2 (G–SRT.3)

Triangles? Yeah, Right, Parts 1 and 2 (G–SRT.8*)

High Altitude Trigonometry, Parts 1 and 2 (G–SRT.8*)

Station Activities

Set 1: Similarity and Scale Factor (G–SRT.2)

Set 2: Sine, Cosine, and Tangent Ratios, and Angles of Elevation and Depression (G–SRT.6, G–SRT.8*)

Mid-Unit Assessment

End-of-Unit Assessment

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Unit 6: Probability

Unit 6 Resources

Lesson 6.1: Describing Events (S–CP.1*)

Lesson 6.2: Using Simulation (S–IC.2*)

Lesson 6.3: The Addition Rule (S–CP.7*)

Lesson 6.4: Conditional Probability and the General Multiplication Rule (S–CP.8*)

Lesson 6.5: Introducing Conditional Probability (S–CP.3*, S–CP.5*, S–CP.6*)

Lesson 6.6: Using Two-Way Frequency Tables (S–CP.4*, S–CP.5*, S–CP.6*)

Lesson 6.7: Understanding Independent Events (S–CP.3b*)

Conceptual Tasks

Gym Survey Analysis, Parts 1 and 2 (S–CP.7*)

Allergies and Probabilities, Parts 1 and 2 (S–CP.3*)

Station Activities

Set 1: Probability (S–CP.1*, S–CP.3*)

Mid-Unit Assessment

End-of-Unit Assessment