Liberal Arts Mathematics 2 Scope and Sequence

Section 1: Operations with Polynomials

Topic 1: Using Expressions to Represent Real-World Situations

Topic 2: Adding and Subtracting Functions

Topic 3: Multiplying Functions

Topic 4: Closure Property

Section 2: Introduction to Functions

Topic 1: Compositions of Functions

Topic 2: Inverse Functions – Part 1

Topic 3: Inverse Functions – Part 2

Topic 4: Recognizing Even and Odd Functions

Topic 5: Key Features of Graphs of Functions

Topic 6: Transformations of Functions – Part 1

Topic 7: Transformations of Functions – Part 2

Topic 8: Average Rate of Change of Functions

Section 3: Modeling Linear Relationships

Topic 1: Linear Equations in One Variable – Part 1

Topic 2: Linear Equations in One Variable – Part 2

Topic 3: Linear Equations and Inequalities in Two Variables

Topic 4: Key Features of Linear Functions

Topic 5: Classifying Linear Functions and Finding Inverses

Section 4: Modeling Quadratic Relationships

Topic 1: Real-Life Examples of Quadratic Functions

Topic 2: Solving Quadratic Equations by Factoring

Topic 3: Solving Quadratic Equations by Factoring - Special Cases - Part 1

Topic 4: Solving Quadratic Equations by Factoring - Special Cases - Part 2

Topic 5: Complex Numbers - Part 1

Topic 6: Complex Numbers - Part 2

Topic 7: Solving Quadratic Equations by Completing the Square

Topic 8: Solving Quadratic Equations Using the Quadratic Formula - Part 1

Topic 9: Solving Quadratic Equations Using the Quadratic Formula - Part 2

Topic 10: Graphing Quadratic Functions in Standard Form

Topic 11: Writing Quadratic Equations in Standard Form from a Graph

Topic 12: Graphing Quadratic Functions in Vertex Form - Part 1

Topic 13: Graphing Quadratic Functions in Vertex Form - Part 2

Topic 14: Writing Quadratic Equations in Vertex Form from a Graph

Topic 15: Converting Quadratic Equations

Section 5: One-Variable Statistics

Topic 1: Dot Plots

Topic 2: Histograms

Topic 3: Box Plots – Part 1

Topic 4: Box Plots – Part 2

Topic 5: Measures of Center and Shapes of Distributions

Topic 6: Measures of Spread – Part 1

Topic 7: Measures of Spread – Part 2

Topic 8: The Empirical Rule

Topic 9: Outliers in Data Sets

Section 6: Two-Variable Statistics

Topic 1: Relationship between Two Categorical Variables – Marginal and Joint Relative Frequency – Part 1

Topic 2: Relationship between Two Categorical Variables – Marginal and Joint Relative Frequency – Part 2

Topic 3: Relationship between Two Categorical Variables – Conditional Frequency

Topic 4: Scatter Plots and Function Models

Topic 5: Residuals and Residual Plots – Part 1

Topic 6: Residuals and Residual Plots – Part 2

Topic 7: Examining Correlation

Section 7: Right Triangles

Topic 1: The Pythagorean Theorem

Topic 2: The Converse of the Pythagorean Theorem

Topic 3: Proving Right Triangles Congruent

Topic 4: Special Right Triangles: 45-45-90

Topic 5: Special Right Triangles: 30-60-90

Topic 6: Right Triangles Similarity – Part 1

Topic 7: Right Triangles Similarity – Part 2

Section 8: Polygons and Coordinate Geometry – Part 1

Topic 1: Introduction to Polygons – Part 1

Topic 2: Introduction to Polygons – Part 2

Topic 3: Introduction to Triangles – Part 1

Topic 4: Introduction to Triangles – Part 2

Topic 5: Triangle Midsegment Theorem – Part 1

Topic 6: Triangle Midsegment Theorem – Part 2

Topic 7: Triangle Inequalities

Topic 8: More Triangle Proofs

Topic 9: Medians of a Triangles

Section 9: Polygons and Coordinate Geometry – Part 1

Topic 1: Introduction to Quadrilaterals – Part 1

Topic 2: Introduction to Quadrilaterals – Part 2

Topic 3: Introduction to Quadrilaterals – Part 3

Topic 4: Parallelograms – Part 1

Topic 5: Parallelograms – Part 2

Topic 6: Rectangles and Squares - Part 1

Topic 7: Rectangles and Squares - Part 2

Topic 8: Rhombi

Section 10: Modeling with Geometry

Topic 1: Geometry Nets and Three-Dimensional Figures

Topic 2: Cavalieri's Principle for Area

Topic 3: Cavalieri's Principle for Volume

Topic 4: Volume of Prisms and Cylinders

Topic 5: Surface Area of Prisms and Cylinders

Topic 6: Volume of Pyramids and Cones

Topic 7: Surface Area of Pyramids and Cones

Topic 8: Spheres

Topic 9: Areas in Real-World Contexts

Topic 10: Volume in Real-World Contexts

Topic 11: Density

Topic 12: Minimizing and Maximizing

Topic 13: Similar Shapes

Topic 14: Cross Sections and Plane Rotations

Topic 15: Typographic Grid Systems Based on Ratios