



Switched-On™
ONLINE

2009-2010 Curriculum Catalog

Geometry

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We are excited that you are including AOP as part of your program of instruction, and we look forward to serving you and your students.

AOP comes complete with a full, multimedia-enriched curriculum for grades 3—12 in five core subjects and electives.

This course catalog covers the following course:

- Geometry

Thanks for choosing us!

Glynlyon Curriculum Development Team

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Geometry

Unit 1

Assignment Title
1. Geometry and the World
2. Nature of Mathematics
3. The History of Geometric Mathematics
4. Geometry's Effect on Me
5. Mathematic System: Set Theory Review
6. Mathematic System: Operations with Sets
7. Quiz 1: History and Set Theory
8. Geometry Undefined Terms: Points
9. Geometry Undefined Terms: Lines
10. Geometry Undefined Terms: Planes
11. Quiz 2: Undefined Terms
12. Defined Terms: Definitions
13. Quiz 3: Defined Terms
14. Geometric Postulates
15. Review of Algebraic Postulates
16. Geometric Theorems
17. Review of Properties of Algebra
18. Quiz 4: Postulates and Theorems
19. Special Project
20. TEST
21. ALTERNATE TEST

Unit 2

Assignment Title
1. Logic and Reasoning
2. History of Logic and Reasoning
3. Quiz 1: Introduction
4. Logic
5. Conjunctions
6. Disjunctions
7. Negation
8. Conditional or Implication Statements
9. Converse, Inverse, Contrapositive
10. Quiz 2: Logic
11. Inductive Reasoning
12. Deductive Reasoning
13. Using Deductive Reasoning
14. Quiz 3: Inductive and Deductive Reasoning
15. Proof Formats: Statement of the Theorem
16. Proof Formats: The Figure
17. Proof Formats: The Given Information
18. Proof Formats: To Prove Statement
19. Proof Formats: The Plan of the Proof
20. Indirect Proof Format: The Paragraph Proof
21. Quiz 4: Proof Format
22. Special Project
23. Test
24. ALTERNATE TEST

Geometry (cont.)

Unit 3

Assignment Title
1. Angle Definitions
2. Angle Measurement
3. Quiz 1: Angles
4. Relationship Definitions
5. Angle Relationship Theorems (1)
6. Angle Relationship Theorems (2)
7. Quiz 2: Angle Theorems
8. Construction: Copying Figures
9. Construction: Bisecting Figures
10. Basic Properties of Parallels
11. Transversals and Special Angles
12. More Proofs: Transversals and Special Angles
13. Continued Proofs: Transversals and Special Angles
14. More Proofs for Postulates 9 and 10
15. Quiz 3: Parallels and Transversals
16. Construction: Perpendiculars
17. Construction: Tangents to Circle
18. Construction: Parallels
19. Classifying Triangles by Sides and Angles
20. Exterior/Remote Interior Angles of Triangle
21. Proofs Involving Triangles
22. Other Polygons
23. Quiz 4: Triangles, Polygons, and Angle Properties
24. Special Project
25. Test
26. ALTERNATE TEST

Unit 4

Assignment Title
1. Defining Congruent Triangles
2. Proving Triangles Congruent (1)
3. Proving Triangles Congruent (2)
4. Proving Right Triangles Congruent
5. Quiz 1: Congruent Triangles and Quadrilaterals
6. Independent Triangles (1)
7. Independent Triangles (2)
8. Overlapping Triangles (1)
9. Overlapping Triangles (2)
10. Isosceles Triangles (1)
11. Isosceles Triangles (2)
12. Construction of Triangles 30-60-90
13. Construction of Triangles 45-45-90
14. Quiz 2: Congruent Triangles and Quadrilaterals
15. Inequality Theorem in One Triangle Part1
16. Inequality Theorem in One Triangle Part2
17. Inequalities in Two Triangles
18. Quadrilateral Parallelograms Theorems Part1
19. Quadrilateral Parallelograms Theorems Part2
20. Quiz 3: Congruent Triangles and Quadrilaterals
21. Triangles that Use Parallelograms in Proofs
22. Parallelograms: Rectangles
23. Parallelograms: Rhombus
24. Trapezoids-Definitions and Proofs
25. Quiz 4: Congruent Triangles and Quadrilaterals
26. Special Project
27. TEST
28. ALTERNATE TEST

Geometry (cont.)

Unit 5

Assignment Title
1. Algebra and Ratios
2. Algebra Properties and Proportions
3. Properties of Proportions
4. Quiz 1: Similar Polygons 1
5. Meaning of Similarity
6. Meaning of Similarity-Theorems
7. Meaning of Similarity-Proofs
8. Theorems about Similar Polygons
9. Theorems about Special Segments in Triangles
10. Theorems about Similar Right Triangles
11. Pythagorean Theorem
12. Theorem about 30-60-90 Right Triangles
13. Theorem about 45-45-90 Right Triangles
14. Quiz 2: Similar Polygons 2
15. Using Triangles in Rectangular Solids
16. Using Triangles in a Regular Square Pyramid
17. Trigonometry-Sine Ratio
18. Trigonometry-Cosine Ratio
19. Trigonometry-Tangent Ratio
20. Using Similar Triangles in Indirect Measure
21. Using Trigonometry in Indirect Measure
22. Quiz 3: Similar Polygons 3
23. Special Project
24. Test
25. ALTERNATE TEST

Unit 6

Assignment Title
1. Characteristics of Circles
2. Characteristics of Spheres
3. Quiz 1: Characteristics of Circles
4. Tangents
5. Arcs
6. Chords
7. Theorems (1)
8. Theorems (2)
9. Quiz 2: Tangents
10. Special Angles Type 1
11. Special Angles Type 2
12. Special Angles Type 3
13. Special Segments
14. Quiz 3: Special Angles Types
15. Construction: Circles
16. Special Project
17. TEST
18. ALTERNATE TEST

Unit 7

Assignment Title
1. Area Concepts of Polygons
2. Area of Rectangles
3. Area of Parallelograms
4. Area of Triangles and Rhombuses
5. Area of Trapezoids
6. Area of Regular Polygons
7. Area Comparison of Polygons
8. Quiz 1: Area Concepts of Polygons
9. Construction: Polygons
10. Circles: Circumference and PI
11. Circles: Area of Circles
12. Circles: Area of Sectors
13. Circles: Area of Segments
14. Quiz 2: Construction of Polygons
15. Solids: Prisms
16. Solids: Pyramids
17. Solids: Cylinders
18. Solids: Cones
19. Solids: Spheres
20. Quiz 3: Solids
21. Construction: Dividing a Segment
22. Construction: 4th Proportion
23. Construction: Geometric Mean
24. Special Project
25. TEST
26. ALTERNATE TEST

Geometry (cont.)

Unit 8

Assignment Title
1. Symmetry
2. Ordered Pairs: Points in a Plane
3. Graphs of Algebraic Sentences
4. Quiz 1: Ordered Pairs: Points in a Plane
5. Distance Formula
6. Equation of a Circle
7. Midpoint Formula
8. Quiz 2: Distance Formula
9. Slope
10. Parallel and Perpendicular Lines
11. Equations of Lines
12. Quiz 3: Lines : Slope
13. Figures in the Coordinate Plane
14. Proofs with Coordinate Geometry (1)
15. Proofs with Coordinate Geometry (2)
16. Quiz 4: Proofs By Coordinate Method: Figures
17. Special Project
18. TEST
19. ALTERNATE TEST

Unit 9

Assignment Title
1. Introduction: Rigid Motion, or Isometry
2. Isometry: Reflection
3. Isometry: Translation
4. Isometry: Rotation
5. Quiz 1: Isometry
6. Dilation: Congruence and Similarity
7. Product Transformation
8. Inverse and Identity Transformation
9. Symmetry Review
10. Quiz 2: Transformations
11. Special Project
12. TEST
13. ALTERNATE TEST

Unit 10

Assignment Title
1. History of Geometry
2. Geometry as a System
3. Geometry Proofs
4. Angle Relationships and Parallels
5. Quiz 1: History of Geometry
6. Congruent Triangles and Quadrilaterals
7. Similar Polygons
8. Circles
9. Quiz 2: Congruent Triangles and Quadrilaterals
10. Area and Volume
11. Coordinate Geometry
12. Quiz 3: Area and Volume
13. Special Project
14. TEST
15. ALTERNATE TEST