

Student Edition

GEOMETRY
A
DEVELOPMENTAL
APPROACH
THROUGH
MEASUREMENT
AND
LOGICAL
PROGRESSION
OF THEORY

By

David Ballard

CHAPTER 1

POINTS, LINES , PLANES , AND ANGLES

- | | |
|---|----------|
| 1. Pre-Chapter 1 Skills and Practice | p. 1-2 |
| 2. Points , Lines , Planes | p. 3-4 |
| 3. Segments , Rays , Distance | p. 5-7 |
| 4. Angles | p. 8-10 |
| 5. Postulates and Theorems for Points, Lines , Planes | p. 11-12 |
| 6. Odd Answer Solutions for Chapter 1 | p. 13-16 |
| 7. Study Guide for Chapter 1 | p. 17-19 |

CHAPTER 2

DEDUCTIVE REASONING

- | | |
|---------------------------------------|----------|
| 1. If - Then Statements ; Converses | p. 20-21 |
| 2. Properties from Algebra | p. 20-23 |
| 3. Proving Theorems | p. 24-26 |
| 4. Special Pairs of Angles | p. 27-29 |
| 5. Perpendicular Lines | p. 30-32 |
| 6. Planning a Proof | p. 33-35 |
| 7. Odd Answer Solutions for Chapter 2 | p. 36-40 |
| 8. Study Guide for Chapter 2 Test | p. 41-42 |

CHAPTER 3

PARALLEL LINES AND PLANES

- | | |
|--|----------|
| 1. Pre - Chapter 3 Algebra Skills and Practice | p. 43 |
| 2. Parallel Lines and Planes | p. 44-47 |
| 3. Properties of Parallel Lines | p. 48-50 |
| 4. Proving Lines Parallel | p. 51-54 |
| 5. Angles of a Triangle | p. 55-60 |
| 6. The Isosceles Triangle Theorem | p. 61-63 |
| 7. Angles of a Polygon | p. 64-67 |
| 8. Inductive Reasoning | p. 68-69 |
| 9. Odd Answer Solutions for Chapter 3 | p. 70-76 |
| 10. Study Guide for Chapter 3 | p. 77-79 |

CHAPTER 4

QUADRILATERALS

- | | |
|--|------------|
| 1. Pre-Chapter 4 Skills and Practice | p. 80-81 |
| 2. Properties of Parallelograms | p. 82-84 |
| 3. Ways to Prove that Quadrilaterals are
Parallelograms | p. 85-87 |
| 4. Theorems Involving Parallel Lines | p. 88-90 |
| 5. Special Parallelograms | p. 91-94 |
| 6. Trapezoids | p. 95-97 |
| 7. Odd Answer Solutions for Chapter 4 | p. 98-104 |
| 8. Study Guide for Chapter 4 | p. 105-107 |

CHAPTER 5

INEQUALITIES

IN

GEOMETRY

- | | |
|--|------------|
| 1. Pre-Chapter 5 Skills and Practice | p. 108 |
| 2. Venn Diagrams | p. 109-111 |
| 3. Inequalities in Triangles | p. 112-114 |
| 4. Inequalities in Two Triangles | p. 115-117 |
| 5. Medians, Altitudes, and Perpendicular Bisectors | p. 118-123 |
| 6. Concurrent Lines | p. 124-125 |
| 7. Odd Answer Solutions for Chapter 5 | p. 126-128 |
| 8. Study Guide for Chapter 5 | p. 129-131 |

CHAPTER 6

CONGRUENT TRIANGLES

- | | |
|---|------------|
| 1. Congruent Figures | p. 132-135 |
| 2. Some Ways to Prove that Two Triangles
are Congruent | p. 136-138 |
| 3. Using Congruent Triangles | p. 139-143 |
| 4. Other Methods of Proving Triangles Congruent | p. 144-146 |
| 5. Odd Answer Solutions for Chapter 6 | p. 147-151 |
| 6. Study Guide for Chapter 6 | p. 152 |
| 7. Study Guide for 1st Semester Exam | p. 153-158 |

CHAPTER 7

SIMILAR POLYGONS

- | | |
|---------------------------------------|------------|
| 1. Ratio and Proportion | p. 159-161 |
| 2. Properties of Proportions | p. 162-164 |
| 3. Similar Polygons | p. 165-166 |
| 4. A Postulate for Similar Triangles | p. 167-171 |
| 5. Theorems for Similar Triangles | p. 172-175 |
| 6. Proportional Lengths | p. 176-179 |
| 7. Odd Answer Solutions for Chapter 7 | p. 180-188 |
| 8. Study Guide for Chapter 7 | p. 189-190 |

CHAPTER 8

RIGHT TRIANGLES

- | | |
|---|------------|
| 1. Pre-Chapter 8 Radical Review | p. 191-194 |
| 2. Similarity in Right Triangles | p. 195-197 |
| 3. The Pythagorean Theorem | p. 198-201 |
| 4. Converse of the Pythagorean Theorem | p. 202-204 |
| 5. Special Right Triangles | p. 205-207 |
| 6. Trigonometric Ratios | p. 208-211 |
| 7. Using Trigonometric Ratios in
Non-Right Triangles | p. 212-213 |
| 8. Odd Answer Solutions for Chapter 8 | p. 214-222 |
| 9. Study Guide for Chapter 8 | p. 223-224 |

CHAPTER 9

CIRCLES

1. Parts of a Circle	p. 225-228
2. Tangents	p. 229-231
3. Arcs and Central Angles	p. 232-234
4. Arcs and Chords	p. 235-236
5. Inscribed Angles	p. 237-238
6. Other Angles	p. 239-240
7. Circles and Lengths of Segments	p. 241-243
8. Odd Answer Solutions for Chapter 9	p. 244-247
9. Study Guide for Chapter 9	p. 248-249

CHAPTER 10

AREAS OF PLANE FIGURES

- | | |
|--|-------------|
| 1. Pre-Chapter 10 Skills and Practice | p. 251-254 |
| 2. Areas of Squares and Rectangles | p. 255-257 |
| 3. Areas of Parallelograms, Triangles,
and Rhombus' | p. 258-261 |
| 4. Areas of Trapezoids | p. 262- 264 |
| 5. Areas of Regular Polygons | p. 265-268 |
| 6. Circumferences and Areas of Circles | p. 269-271 |
| 7. Arc Lengths and Areas of Sectors | p. 272-274 |
| 8. Odd Answer Solutions for Chapter 10 | p. 275-286 |
| 9. Study Guide for Chapter 10 | p. 287-288 |

CHAPTER 11

AREAS AND VOLUMES OF SOLIDS

- | | |
|---|------------|
| 1. Prisms and Cylinders | p. 289-292 |
| 2. Spheres | p. 293-294 |
| 3. Pyramids and Cones | p. 295-300 |
| 4. Ratios of Perimeters, Areas, and Volumes | p. 301-302 |
| 5. Odd Answer Solutions for Chapter 11 | p. 303-305 |
| 6. Study Guide for Chapter 11 | p. 306 |

CHAPTER 1

POINTS, LINES, PLANES, AND ANGLES

- | | |
|--|----------|
| 1. Pre-Chapter 1 Skills and Practice | p. 1-2 |
| 2. Points, Lines, Planes | p. 3-4 |
| 3. Segments, Rays, Distance | p. 5-7 |
| 4. Angles | p. 8-10 |
| 5. Postulates and Theorems for Points, Lines, Planes | p. 11-12 |
| 6. Odd Answer Solutions for Chapter 1 | p. 13-16 |
| 7. Study Guide for Chapter 1 | p. 17-19 |

