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# GEOMETRY

## Student Text

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## Acknowledgments

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The Carnegie Learning Development Team

Geometry was used to design the archways that form the tunnel on the front cover. The perspective of the photograph is very interesting. It appears as though the archways continue to get smaller as you go through the tunnel. Actually, each archway is the same size. This is because a three-dimensional object, the tunnel, is being represented on a two-dimensional surface, the cover of this book. Each archway is a half of a circle, or a semicircle. To design the tunnel, architects used the formula for the circumference of a semicircle, which is the formula shown on the cover. As you work through the Cognitive Tutor® **Geometry** text and software, you will see additional opportunities for using Geometry in your everyday activities.

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Dear Student,

You are about to begin an exciting adventure using mathematics, the language of science and technology. As you sit in front of a computer screen or video game, ride in an automobile, fly in a plane, talk on a cellular phone, or use any of the tools of modern society, realize that mathematics was critical in its invention, design, and production.

The workplace today demands that employees be technologically literate, work well in teams, and be self-starters. At Carnegie Learning, we have designed a mathematics course that uses state-of-the-art computer software with collaborative classroom activities.

As you use the Cognitive Tutor<sup>®</sup> **Geometry** software, it actually learns about you as you learn about mathematics. As you work, you will receive “just-in-time” instruction so that you are always ready for the next problem. In the classroom, you will work with your peers to solve real-world problem situations. Working in groups, you will learn to use multiple representations to analyze questions and write or present your answers.

Throughout the entire process, your teacher will be a facilitator and guide in support of your learning. As a result, you will become a self-sufficient learner, moving through the software and Student Text at your own rate and discovering solutions to problems that you never thought were possible to solve.

Throughout this year, have fun while Learning by Doing!

**The Cognitive Tutor<sup>®</sup> Geometry Development Team**

# Contents

## 1 Perimeter and Area ■ p. 2

- 1.1 Building a Deck**  
Introduction to Polygons, Perimeter, and Area ■ p. 5
- 1.2 Weaving a Rug**  
Area and Perimeter of a Rectangle  
and Area of a Parallelogram ■ p. 13
- 1.3 Sailboat Racing**  
Area of a Triangle ■ p. 21
- 1.4 The Keystone Effect**  
Area of a Trapezoid ■ p. 27
- 1.5 Traffic Signs**  
Area of a Regular Polygon ■ p. 33
- 1.6 Photography**  
Circumference and Area of a Circle ■ p. 39
- 1.7 Installing Carpeting and Tile**  
Composite Figures ■ p. 49

## 2 Volume and Surface Area ■ p. 56

- 2.1 Backyard Barbecue**  
Introduction to Volume and Surface Area ■ p. 59
- 2.2 Turn Up the Volume**  
Volume of a Prism ■ p. 65
- 2.3 Bending Light Beams**  
Surface Area of a Prism ■ p. 73
- 2.4 Modern Day Pyramids**  
Volume of a Pyramid ■ p. 79
- 2.5 Soundproofing**  
Surface Area of a Pyramid ■ p. 85
- 2.6 Making Concrete Stronger**  
Volume and Surface Area of a Cylinder ■ p. 91
- 2.7 Sand Piles**  
Volume and Surface Area of a Cone ■ p. 97
- 2.8 Ball Bearings and Motion**  
Volume and Surface Area of a Sphere ■ p. 103

## 3 Introduction to Angles and Triangles ■ p. 110

### 3.1 Constellations

Naming, Measuring, and Classifying Angles ■ p. 113

### 3.2 Cable-Stayed Bridges

Special Angles ■ p. 121

### 3.3 Designing a Kitchen

Angles of a Triangle ■ p. 129

### 3.4 Origami

Classifying Triangles ■ p. 137

### 3.5 Building a Shed

The Triangle Inequality ■ p. 145

## 4 Right Triangle Geometry ■ p. 150

### 4.1 Tiling a Bathroom Wall

Simplifying Square Root Expressions ■ p. 153

### 4.2 Installing a Satellite Dish

The Pythagorean Theorem ■ p. 157

### 4.3 Drafting Equipment

Properties of  $45^\circ$ – $45^\circ$ – $90^\circ$  Triangles ■ p. 163

### 4.4 Finishing Concrete

Properties of  $30^\circ$ – $60^\circ$ – $90^\circ$  Triangles ■ p. 167

### 4.5 Meeting Friends

The Distance Formula ■ p. 175

### 4.6 Treasure Hunt

The Midpoint Formula ■ p. 183

## 5 Parallel and Perpendicular Lines ■ p. 188

### 5.1 Visiting Washington, D.C.

Transversals and Parallel Lines ■ p. 191

### 5.2 Going Up?

Introduction to Proofs ■ p. 199

### 5.3 Working with Iron

Parallel Lines and Proofs ■ p. 205

### 5.4 Parking Lot Design

Parallel and Perpendicular Lines in the Coordinate Plane ■ p. 213

### 5.5 Building a Henge

Exploring Triangles in the Coordinate Plane ■ p. 223

### 5.6 Building a Roof Truss

Angle and Line Segment Bisectors ■ p. 229

### 5.7 Warehouse Space

Points of Concurrency in Triangles ■ p. 235

## 6 Simple Transformations ■ p. 240

**6.1 Paper Snowflakes**  
Reflections ■ p. 243

**6.2 Good Lighting**  
Rotations ■ p. 253

**6.3 Web Page Design**  
Translations ■ p. 261

**6.4 Shadow Puppets**  
Dilations ■ p. 269

**6.5 Cookie Cutters**  
Symmetry ■ p. 277

## 7 Similarity ■ p. 280

**7.1 Ace Reporter**  
Ratio and Proportion ■ p. 283

**7.2 Framing a Picture**  
Similar and Congruent Polygons ■ p. 289

**7.3 Using an Art Projector**  
Proving Triangles Similar: AA, SSS, and SAS ■ p. 297

**7.4 Modeling a Park**  
Indirect Measurement ■ p. 305

**7.5 Making Plastic Containers**  
Similar Solids ■ p. 311

## 8 Congruence ■ p. 316

**8.1 Glass Lanterns**  
Introduction to Congruence ■ p. 319

**8.2 Computer Graphics**  
Proving Triangles Congruent by Using SSS and SAS ■ p. 323

**8.3 Wind Triangles**  
Proving Triangles Congruent by Using ASA and AAS ■ p. 329

**8.4 Planting Graph Vines**  
Proving Triangles Congruent by Using HL ■ p. 337

**8.5 Koch Snowflake**  
Fractals ■ p. 341

# 9

## Quadrilaterals ■ p. 348

### 9.1 Quilting and Tessellations

Introduction to Quadrilaterals ■ p. 351

### 9.2 When Trapezoids Are Kites

Kites and Trapezoids ■ p. 357

### 9.3 Binocular Stand Design

Parallelograms and Rhombi ■ p. 363

### 9.4 Positive Reinforcement

Rectangles and Squares ■ p. 369

### 9.5 Stained Glass

Sum of the Interior Angle Measures in a Polygon ■ p. 373

### 9.6 Pinwheels

Sum of the Exterior Angle Measures in a Polygon ■ p. 377

### 9.7 Planning a Subdivision

Rectangles and Parallelograms in the Coordinate Plane ■ p. 383

# 10

## Circles ■ p. 388

### 10.1 Riding a Ferris Wheel

Introduction to Circles ■ p. 391

### 10.2 Holding the Wheel

Central Angles, Inscribed Angles, and Intercepted Arcs ■ p. 397

### 10.3 Manhole Covers

Measuring Angles Inside and Outside of Circles ■ p. 401

### 10.4 Color Theory

Chords and Circles ■ p. 407

### 10.5 Solar Eclipses

Tangents and Circles ■ p. 413

### 10.6 Gears

Arc Length ■ p. 417

### 10.7 Playing Darts

Areas of Parts of Circles ■ p. 421

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## 11 Right Triangle Trigonometry ■ p. 426

### 11.1 Wheelchair Ramps

The Tangent Ratio ■ p. 429

### 11.2 Golf Club Design

The Sine Ratio ■ p. 435

### 11.3 Attaching a Guy Wire

The Cosine Ratio ■ p. 439

### 11.4 Using a Clinometer

Angles of Elevation and Depression ■ p. 443

## 12 Extensions in Area and Volume ■ p. 446

### 12.1 Replacement for a Carpenter's Square

Inscribed Polygons ■ p. 449

### 12.2 Box It Up

Nets ■ p. 455

### 12.3 Tree Rings

Cross Sections ■ p. 459

### 12.4 Minerals and Crystals

Polyhedra and Euler's Formula ■ p. 463

### 12.5 Isometric Drawings

Compositions ■ p. 469

**Glossary** ■ p. G-1

**Index** ■ p. I-1

