

Carnegie Learning®

Georgia Mathematics 2

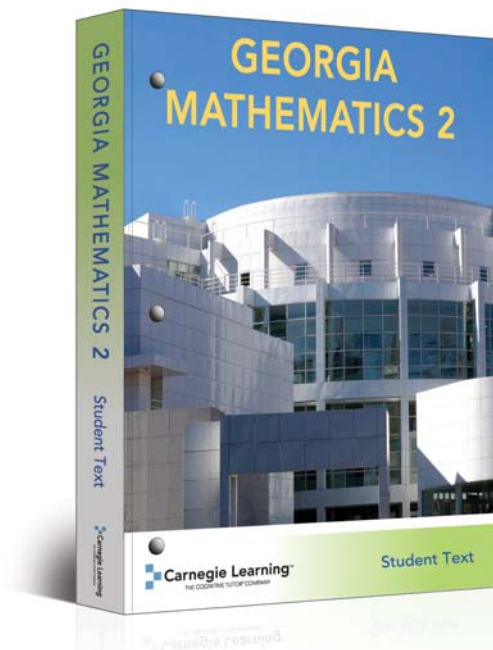
Course Description

Carnegie Learning *Georgia Mathematics 2* is designed as a second-year high school mathematics course and aligns with *Georgia Mathematics 2* Performance Standards and Frameworks. Topics in algebra, geometry, statistics, and probability are included.

The algebraic content focuses on using algebraic models to represent and explore real-world phenomena. Students use numerical, graphical, and algebraic techniques to explore quadratic, exponential, and piecewise functions and to solve quadratic, exponential, and absolute value equations and inequalities.

The geometric content focuses on right triangle trigonometry, circles, and spheres. Students use right triangle trigonometry to formulate and solve problems. Students also discover, justify, and apply properties of circles and spheres.

The statistics content focuses on sample data to make informal inferences about population means and standard deviations. Students also fit curves to data and examine the issues related to curve fitting.



6.3 Golf Club Design
 The Sine Ratio

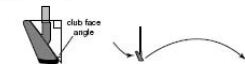
Objectives
In this lesson, you will:

- Write ratios that represent sines of angles.
- Find sines of angles.

Key Term


- sine of an angle

SCENARIO Each golf club in a set of clubs is designed to make the ball reach different distances and different heights. One design element of a golf club is the angle of the club face.




Problem 1 The Club Face Angle


As shown above, you can draw a right triangle that is formed by the club face angle. The right triangles formed by different club face angles are shown below.



19.3 mm
54 mm
21°



34.4 mm
60 mm
30°



39 mm
62 mm
39°

48.2 mm
48.2 mm

A. How do you think the club angle affects the path of the ball? Use a complete sentence in your answer.

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This is Unit 6 Trigonometric Ratios, Section 3 The Sine Ratio. In this section, students will define and apply sine ratios to right triangles, and explain the relationship between the trigonometric ratios of complementary angles.

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To view a PDF of the *Georgia Math 2* Textbook Sampler, please visit: www.carnegielearning.com/Georgia.

Availability

Georgia Mathematics 2 books are available now. Contact a sales representative to order.