UNIT 1: THE NEED TO READ

LESSON 1: READING AND VOCABULARY

Study: Active Reading
Learn skills and strategies that will help you be an active reader in this and other courses.
Duration: 0 hrs 45 mins Scoring: 0 points

Quiz: Active Reading
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 10 mins Scoring: 10 points

Study: Building a Vocabulary
Learn how to use words to express a variety of ideas and study a few helpful vocabulary words and tips.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Building a Vocabulary
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 10 mins Scoring: 10 points

LESSON 2: GETTING STARTED IN THE COURSE

Study: Reading Strategies in the Course
Learn how the eight reading strategies will be useful in this course.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Reading Strategies in the Course
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 10 mins Scoring: 10 points

LESSON 3: THE NEED TO READ WRAP-UP

Review: The Need to Read
Get ready for the unit test by reviewing important ideas and skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Test (CS): The Need to Read
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 20 mins Scoring: 20 points

Test (TS): The Need to Read
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 20 points

LESSON 4: DIAGNOSTIC

Diagnostic: The Need to Read
Take a diagnostic test that will create a study plan based on your answers.
Duration: 0 hrs 20 mins Scoring: 25 points

UNIT 2: FOUNDATIONS OF GEOMETRY

LESSON 1: ENTERING THE WORLD OF GEOMETRY

Study: Entering the World of Geometry
Get started by familiarizing yourself with some introductory geometric objects and ideas, such as points, line segments,

grouping, similarity, and difference.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Entering the World of Geometry

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: INDUCTION: THE SEARCH FOR RULES AND PATTERNS

Study: Induction: The Search for Rules and Patterns

Learn about looking for patterns, making conjectures, cross-referencing to history and science, real-world examples of inductive reasoning, building a triangle, and examples of symmetry.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Induction: The Search for Rules and Patterns

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: DEDUCTION: MAKING A CASE

Study: Deduction: Making a Case

Learn about the definition of deductive reasoning; postulates and conditional statements; and using deductive reasoning in proofs. Explore a real-world example of deducing that deals with the combination of a lock.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Deduction: Making a Case

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: THE LOOK AND LANGUAGE OF LOGIC

Study: The Look and Language of Logic

Explore examples of geometric reasoning. Learn about converses, inverses, and contrapositives of conditional statements.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: The Look and Language of Logic

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: INTRODUCTION TO PROOF

Study: Introduction to Proof

Learn about postulates and axioms, givens, proof by contradiction (indirect proof), theorems and corollaries, and the axiomatic method.

Duration: 0 hrs 50 mins Scoring: 0 points

Quiz: Introduction to Proof

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: PROOF IN GEOMETRY

Study: Proof in Geometry

Learn about Euclid's *Elements* and real-world applications of geometry, such as finding your way in a desert or fog, making a shot in miniature golf, and calculating the distance to ships offshore.

Duration: 0 hrs 50 mins Scoring: 0 points

Quiz: Proof in Geometry

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: FOUNDATIONS OF GEOMETRY WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Foundations of Geometry

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Get My Logic?

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Foundations of Geometry

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Foundations of Geometry

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 8: DIAGNOSTIC

Diagnostic: Foundations of Geometry

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 3: POINTS, LINES, AND ANGLES

LESSON 1: POINTS

Study: Points

Learn about the concept of a point, why points have no size, and Euclid's definition of a point.

Duration: 0 hrs 50 mins Scoring: 0 points

Quiz: Points

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: SEGMENTS

Study: Segments

Learn the notation for a line segment using its endpoints. Explore line segment length and the distance between points on a segment. Investigate midpoints of line segments and the segment addition postulate.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Segments

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: RAYS, LINES, AND ANGLES

Study: Rays, Lines, and Angles

Learn about the relationship of rays, lines, and angles to direction; the definition of a line; notation for rays and lines; building and defining an angle (including its vertex and sides); conventions for naming angles; and straight and zero angles.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Rays, Lines, and Angles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: MORE ABOUT ANGLES

Study: More about Angles

Learn about measuring angles; units; notation; measuring a segment using a protractor; acute, obtuse, and right angles; equations for adjacent angles; angle bisectors; linear pairs; and complementary and supplementary angles.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Identifying Types of Angles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Angle Bisectors and Adjacent Angles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: CONGRUENT SEGMENTS AND ANGLES

Study: Congruent Segments and Angles

Learn about the definitions of congruent line segments and angles, notation, the midpoint theorem, and congruence versus equality.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Congruent Segments and Angles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: PLANES AND THE SPACE OF GEOMETRY

Study: Planes and the Space of Geometry

Learn about dimensionality, collinear points, two-dimensional objects, the geometric plane, the flat plane, postulate coplanar objects, and three-dimensional objects (solids).

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Planes and the Space of Geometry
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: WHAT IT IS LIKE TO LIVE IN A PLANE

Study: What It Is Like to Live in a Plane
Take part in an exercise that deals with location and direction in two dimensions.
Duration: 0 hrs 50 mins Scoring: 0 points

LESSON 8: INTERSECTING LINES

Study: Intersecting Lines
Learn about intersections that form vertical angles; the vertical angle theorem; perpendicular lines, rays, and segments; distance and length; and perpendicular bisectors.
Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Intersecting Lines
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: PARALLEL LINES

Study: Parallel Lines
Learn about skew lines, coplanar lines that do not intersect, parallel line notation, transversals and corresponding angles, alternate interior angles, consecutive interior angles, and parallel line theorems.
Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Parallel Lines
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 10: SOLVING THE MIRROR PROBLEM

Study: Solving the Mirror Problem
Learn about applying theorems from this unit to the problem of measuring light reflected off a mirror. Learn about the law of reflection.
Duration: 0 hrs 50 mins Scoring: 0 points

LESSON 11: POINTS, LINES, AND ANGLES WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 1 hr Scoring: 100 points

Review: Points, Lines, and Angles
Get ready for the unit test by reviewing important ideas and skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: What If You Lived in a Plane?
Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Points, Lines, and Angles
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Points, Lines, and Angles
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 12: DIAGNOSTIC

Diagnostic: Points, Lines, and Angles
Take a diagnostic test that will create a study plan based on your answers.
Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 4: TRIANGLES

LESSON 1: WHAT IS A TRIANGLE?

Study: What Is a Triangle?
Learn about the definition and parts of a triangle; opposite and included figures; naming and sorting triangles; equilateral, isosceles, and scalene triangles; and the triangle inequality theorem.
Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Naming Triangles by Angle Measures
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Naming Triangles by Side Lengths
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: The Triangle Inequality Theorem
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: THE ANGLES OF A TRIANGLE

Study: The Angles of a Triangle
Explore the angle sum theorem and third angle theorem for triangles. Investigate the relationship between a given triangle's vertex and its exterior and remote interior angles.
Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Angle Theorems
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Exterior and Remote Interior Angles
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: CONGRUENCE

Study: Congruence

Learn about congruence, transformations of triangles, corresponding triangles, notation for writing congruence statements, and the CPCTC triangle congruence theorem.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Congruent Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Properties of Congruence

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: CONGRUENCE POSTULATES

Study: Congruence Postulates

Learn about postulates including the SSS, SAS, ASA, and AAS theorems.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Using Congruence Postulates

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: The AAS Theorem

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: PROOFS OF CONGRUENCE

Study: Proofs of Congruence

Learn about proving that parts of triangles are congruent by using Thales's method for measuring the distance from ship to shore.

Duration: 0 hrs 50 mins Scoring: 0 points

Quiz: Proofs of Congruence

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: SIMILAR TRIANGLES

Study: Similar Triangles

Learn about similarity versus congruence, testing for similarity among triangles, proportionality, the definition of similar triangles, and scale factor.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Similar Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: RATIOS AND PROPORTIONS

Study: Ratios and Proportions

Learn about ratios, proportions, means, and extremes. Learn about applying the cross-product property application to the student-teacher ratio problem and the photo-enlargement problem.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Ratios and Proportions

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 8: SIMILARITY THEOREMS

Study: Similarity Theorems

Learn about the ASA similarity postulate, the SSS similarity theorem, and the SAS similarity theorem.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Similarity Theorems

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: TRIANGLE THEOREMS

Study: Triangle Theorems

Learn and prove the isosceles triangle theorem and its converse. Investigate two corollaries involving angle measures for equilateral triangles. Explore theorems for scalene triangles. Apply what you have learned to solve Thales's problem.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Isosceles and Equilateral Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Scalene Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 10: MEDIANS, ALTITUDES, AND BISECTORS

Study: Medians, Altitudes, and Bisectors

Identify and explore medians, altitudes, angle bisectors, and perpendicular bisectors of triangles. Discover their relationship to centroids, orthocenters, incenters, and circumcenters.

Duration: 0 hrs 50 mins Scoring: 0 points

Quiz: Medians, Altitudes, and Bisectors

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 11: THE PARALLAX PROBLEM

Study: The Parallax Problem

Learn to apply the concepts of congruence, similarity, ratio, and proportion to the solution of a real-world parallax problem.

Duration: 0 hrs 50 mins Scoring: 0 points

LESSON 12: TRIANGLES WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 1 hr Scoring: 100 points

Review: Triangles
Get ready for the unit test by reviewing important ideas and skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: The Well-Balanced Triangle
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Triangles
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Triangles
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 13: DIAGNOSTIC

Diagnostic: Triangles
Take a diagnostic test that will create a study plan based on your answers.
Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 5: RIGHT TRIANGLES

LESSON 1: AREA OF A TRIANGLE

Study: Area of a Triangle
Learn about the area of a polygon, square units, and the triangle area formula and theorem.
Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Area of a Triangle
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: THE PYTHAGOREAN THEOREM

Study: The Pythagorean Theorem
Learn how the Pythagorean theorem applies only to right triangles and discover one proof of it. Learn about the converse of the Pythagorean theorem, Pythagorean triples, and applying the theorem to the problem of fitting a baseball bat into a rectangular trunk.
Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: The Pythagorean Theorem
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: CONGRUENT RIGHT TRIANGLES

Study: Congruent Right Triangles
Learn about the HL, LL, HA, LA, and perpendicular bisector theorems. Learn about the angle bisector theorem and its

converse.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Proving Right Triangle Congruence

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Right Triangle Measurements

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: SIMILAR RIGHT TRIANGLES

Study: Similar Right Triangles

Explore the properties of similar right triangles. Prove that if an altitude is drawn from the right-angle vertex of a right triangle to its hypotenuse, then three similar triangles are formed. Calculate the missing sides of similar right triangles by using proportions and apply concepts learned to a miniature-golf problem.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Similar Right Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: SPECIAL RIGHT TRIANGLES

Study: Special Right Triangles

Explore 45-45-90 and 30-60-90 triangles as special cases of right triangles and learn how to apply the ratios of their side lengths.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: 45-45-90 Right Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: 30-60-90 Right Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: TRIGONOMETRIC RATIOS

Study: Trigonometric Ratios

Learn the definitions of *sine*, *cosine*, and *tangent*. Memorize the shortcut "soh-cah-toa" as a way to relate these ratios. Explore the use of trigonometric ratios in the solution of a real-world problem involving the construction of a cable car.

Duration: 0 hrs 50 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 30 mins Scoring: 0 points

Quiz: Trigonometric Ratios

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: RIGHT TRIANGLES WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Right Triangles

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: A Closer Look at a Baseball Diamond

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Right Triangles

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Right Triangles

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 8: DIAGNOSTIC

Diagnostic: Right Triangles

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 6: GEOMETRY SEMESTER 1 REVIEW AND EXAM

LESSON 1: GEOMETRY SEMESTER 1

Review: Geometry Semester 1

Get ready for the exam by reviewing important ideas and skills covered in this semester.

Duration: 1 hr Scoring: 0 points

Exam: Geometry Semester 1

Take a computer-scored exam to show what you have learned in this semester.

Duration: 0 hrs 50 mins Scoring: 200 points

UNIT 7: QUADRILATERALS AND OTHER POLYGONS

LESSON 1: POLYGONS AND QUADRILATERALS

Study: Polygons and Quadrilaterals

Learn the definitions of a polygon and a quadrilateral and the relationship of one to the other. Learn about convex, concave, regular, congruent, and similar polygons and how to identify and name polygons and quadrilaterals.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Identifying and Naming Polygons and Quadrilaterals

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Sorting and Recognizing Polygons

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: ANGLE SUMS OF A POLYGON

Study: Angle Sums of a Polygon

Learn about the diagonal of a polygon, the formula for the sum of the measures of a polygon's interior angles and exterior angles, and a theorem for the sum of their measures.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Angle Sums of a Polygon

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: PARALLELOGRAMS

Study: Parallelograms

Learn about the definition of a parallelogram, properties and theorems of parallelograms, consecutive angle pairs, and diagonals.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Parallelograms

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: TESTS FOR PARALLELOGRAMS

Study: Tests for Parallelograms

Explore parallelogram theorems involving opposite side lengths, opposite and consecutive angle measures, and bisecting diagonals. Then work through a sample proof.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Tests for Parallelograms

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: RECTANGLES

Study: Rectangles

Learn about the definition of a rectangle, congruent diagonal theorems, and right angle theorems. Explore a sample problem about using the congruent diagonal theorem to prove that a window is rectangular.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Rectangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: RHOMBI AND SQUARES

Study: Rhombi and Squares

Identify the properties and definitions of a rhombus and a square. Prove that the diagonals of a rhombus are perpendicular. Investigate how diagonals of a rhombus bisect opposite vertices. Apply the properties of rhombi and squares to find missing side lengths, diagonal lengths, and angle measures.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Rhombi and Squares

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: TRAPEZOIDS

Study: Trapezoids

Learn the definition of a trapezoid and identify its parts. Explore how base angles and diagonals of an isosceles trapezoid are congruent. Investigate the medians of a trapezoid. Apply the properties of trapezoids and isosceles trapezoids to find missing side lengths and median lengths.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Trapezoids

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 8: AREA AND PERIMETER OF QUADRILATERALS

Study: Area and Perimeter of Quadrilaterals

Learn about the formulas for the perimeter of a parallelogram, a rhombus, and a square, and for the area of a polygon, a rectangle, and a square. Complete a sample problem in which you must calculate the area of a square. Learn about the altitude, base, and height of parallelograms and the formulas for the areas of a parallelogram and a trapezoid.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Area and Perimeter of Quadrilaterals

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Area of Rhombi and Trapezoids

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: AREA AND PERIMETER OF POLYGONS

Study: Area and Perimeter of Polygons

Find the perimeter of any polygon. Determine the areas of irregular polygons by breaking them up into quadrilaterals and regular polygons. Use the apothem formula to find the area of a regular polygon. Complete sample problems about the area of irregular polygons.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Area and Perimeter of Polygons
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 10: POLYGONS AND QUADRILATERALS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 0 hrs 50 mins Scoring: 100 points

Review: Quadrilaterals and Other Polygons
Get ready for the unit test by reviewing important ideas and skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Parts, Bits, and Pieces
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Quadrilaterals and Other Polygons
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Quadrilaterals and Other Polygons
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 11: DIAGNOSTIC

Diagnostic: Quadrilaterals and Other Polygons
Take a diagnostic test that will create a study plan based on your answers.
Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 8: CIRCLES

LESSON 1: WHAT IS A CIRCLE?

Study: What Is a Circle?
Learn about the definition of a circle and about its center, radius, and circumference.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: What Is a Circle?
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: CHORDS

Study: Chords
Investigate the properties and definitions of chords and diameters. Discover that two chords are congruent if they are the same distance from the center of the circle. Prove that the radius bisects a chord if it is perpendicular to the chord.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Congruent Chords
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Chords and Perpendicular Radii
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Diameter of a Circle
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: ARCS

Study: Arcs
Learn the definitions of arc, endpoint, central angle, and intercept. Learn about minor and major arcs and semicircles, arc notation, the measure of minor and major arcs, and the arc congruence and congruent chord theorems.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Arc Types and Measure
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Congruent Chords and Circle Angle Measure
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: CIRCLES AND ANGLES

Study: Circles and Angles
Learn the definition of an inscribed angle. Experiment with inscribed angles and their intercepted arcs. Discover and prove that an inscribed angle is half the measure of its intercepted arc. Discover and prove the intersecting chord theorem.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Inscribed Angles
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Intersecting Chord Theorem
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: SECANTS AND TANGENTS

Study: Secants and Tangents
Learn about the definition of secant and about secant-secant angle, its theorem, and proving the theorem. Learn about tangent line, point of tangency and tangent segments, tangents perpendicular to a circle's radius, a tangent-tangent angle and its theorem, and a tangent-chord angle and its theorem. Explore a sample proof.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Secant-Secant Angles
Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Tangent-Chord Angles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Tangent-Tangent Angles and Their Intercepted Arcs

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: CIRCUMFERENCE AND ARC LENGTH

Study: Circumference and Arc Length

Learn about the irrational number pi and the formula for finding the circumference of a circle. Apply circumference to a real-world problem about how to build a bridge that's tall enough for boats to travel beneath it. Learn about the degree measure of an arc and arc length. Derive the formula for arc length.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Circumference of a Circle

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Arc Length

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: AREA AND SECTORS

Study: Area and Sectors

Learn about the formula for the area of a circle. Explore a case study comparing the cost per square inch of small and large pizzas. Learn about sectors and the area of a sector.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Area of a Circle

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Area of a Sector

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 8: CIRCLES AND TRIANGLES

Study: Circles and Triangles

Learn about inscribed objects; circumscribed objects; and the definitions of incenter and circumcenter.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Circles and Triangles

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: CIRCLES AND POLYGONS

Study: Circles and Polygons

Learn about the theorems of a quadrilateral inscribed in a circle and of a parallelogram inscribed in a circle.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Circles and Polygons

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 10: WHAT IS A CIRCLE WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 0 hrs 50 mins Scoring: 100 points

Review: Circles

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: A Circular Peg within a Square Hole

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Circles

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Circles

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 11: DIAGNOSTIC

Diagnostic: Circles

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 9: COORDINATE GEOMETRY

LESSON 1: THE CARTESIAN COORDINATE SYSTEM

Study: The Cartesian Coordinate System

Learn about René Descartes, latitude and longitude as a grid, the Cartesian coordinate system as perpendicular number lines, axes and the origin, the *xy*-plane, *x*- and *y*-coordinates, and ordered pairs.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: The Cartesian Coordinate System

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: MIDPOINT FORMULA

Study: Midpoint Formula

Learn about the midpoints of horizontal, vertical, and diagonal line segments and about the midpoint formula. Complete a sample problem.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Midpoint Formula
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: THE DISTANCE FORMULA

Study: The Distance Formula
Derive the distance formula from the Pythagorean theorem. Use this formula to calculate the distance between any two points. Apply the distance formula in a real-world problem that involves locating the shortest route on a nautical map.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: The Distance Formula
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: COORDINATES AND DATA

Study: Coordinates and Data
Learn about graphs and the Cartesian coordinate system, plotting data points, looking for patterns, finding correlations, dependent and independent variables, the line of best fit, and deviation and range.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Coordinates and Data
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: PATTERNS AND LINES

Study: Patterns and Lines
Learn about linear equations, ordered pairs, and data points that form a straight line.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Patterns and Lines
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: SLOPE

Study: Slope
Learn about measuring slope, rise, and run; the slope formula; negative zero and undefined slope; and measuring the rate of change of a dependent variable.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Computing Slope
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Special Cases of Slope
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: THE RESCUE SHIP PROBLEM

Study: The Rescue Ship Problem
Explore a case study about using a parallel rule and the slope formula to steer a ship through dangerous waters.
Duration: 0 hrs 40 mins Scoring: 0 points

LESSON 8: PARALLEL AND PERPENDICULAR LINES

Study: Parallel and Perpendicular Lines
Learn about the definitions and slopes of parallel and perpendicular lines. Learn about negative reciprocals.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Parallel and Perpendicular Lines
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: EQUATIONS OF LINES

Study: Equations of Lines
Learn about and explore examples of properties of lines, the *y*-intercept, the slope-intercept equation, and the point-slope equation.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Equations of Lines — Part I
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Equations of Lines — Part II
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 10: CIRCLES

Study: Circles
Use algebra to find an equation whose solution set is a circle. Learn about the standard equation for circles that are not centered at the origin.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Circles Centered at the Origin
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Circles Not Centered at the Origin

Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 11: THE CARTESIAN COORDINATE SYSTEM WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 0 hrs 50 mins Scoring: 100 points

Review: Coordinate Geometry
Get ready for the unit test by reviewing important ideas and skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Graph Paper Puzzles
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Coordinate Geometry
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Coordinate Geometry
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 12: DIAGNOSTIC

Diagnostic: Coordinate Geometry
Take a diagnostic test that will create a study plan based on your answers.
Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 10: THREE-DIMENSIONAL SOLIDS

LESSON 1: THREE DIMENSIONS

Study: Three Dimensions
Learn about measuring three-dimensional figures.
Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Three Dimensions
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: WHAT IS A POLYHEDRON?

Study: What Is a Polyhedron?
Learn about the definition and elements of a polyhedron, prisms and their components, triangular and rectangular prisms, cubes, and regular and irregular pyramids.
Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: What Is a Polyhedron?
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: CYLINDERS AND CONES

Study: Cylinders and Cones
Learn about the definition, components, and properties of a cylinder; the definition and components of a cone; and the similarities between cones and pyramids.
Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Cylinders and Cones
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: PLATONIC SOLIDS

Study: Platonic Solids

Learn about polygonal numbers, regularity of Platonic solids, and building your own Platonic solids.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Platonic Solids

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: SURFACE AREA

Study: Surface Area

Learn about perimeter and surface area; base and lateral area; slant height versus altitude; and the formulas for surface area of a right prism, an oblique prism, a regular pyramid, an oblique cylinder, a right cone, and an oblique cone. Explore sample problems dealing with these subjects.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Surface Area of Regular Prisms and Pyramids

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Surface Area of Right Cylinders and Cones

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: VOLUME

Study: Volume

Learn about area and volume, the formulas for volume of a cube and a rectangular prism, and Bonaventura Francesco Cavalieri's principle. Learn about the formulas for volume of a cylinder, a pyramid, and a cone; explore sample problems dealing with these formulas. Learn about cross-sectional area.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Volume of Prisms, Cylinders, and Cubes

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

Quiz: Volume of Cones, Cylinders, and Pyramids

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: SPHERES

Study: Spheres

Learn about the definition of a sphere; the formulas for surface area and volume of a sphere; comparing the surface area and volume of a sphere, cube, cylinder, and cone; and using Cavalieri's principle to derive the formula for volume of a sphere.

Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Spheres
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 8: SIMILAR SOLIDS

Study: Similar Solids
Learn about similar prisms, pyramids, cylinders, cones, and spheres; the constant ratio between corresponding parts of similar solids; and the ratio of volumes of similar solids.
Duration: 0 hrs 40 mins Scoring: 0 points

Checkup: Practice Problems
Check your understanding of the lesson.
Duration: 0 hrs 25 mins Scoring: 0 points

Quiz: Similar Solids
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: THREE DIMENSIONS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 0 hrs 50 mins Scoring: 100 points

Review: Three-Dimensional Solids
Get ready for the unit test by reviewing important ideas and skills.
Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Polyhedron Building Blocks
Join a three- to five-question discussion to practice methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Three-Dimensional Solids
Take a computer-scored test to check what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Three-Dimensional Solids
Take a teacher-scored test to check what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 10: DIAGNOSTIC

Diagnostic: Three-Dimensional Solids
Take a diagnostic test that will create a study plan based on your answers.
Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 11: TOPICS IN GEOMETRY

LESSON 1: CONSTRUCTIONS

Study: Constructions
Learn about using a straightedge and a compass, common notions of Euclidean geometry, five postulates, constructing an equilateral triangle and a regular hexagon, bisecting an angle, and constructing a perpendicular bisector.
Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Constructions
Take a quiz to check your understanding of what you have learned.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: PAPER FOLDING

Study: Paper Folding
Learn about constructing geometric solids with folding paper, coinciding objects bisecting an angle, and constructing a

parallel line segment.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Paper Folding

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: SYMMETRY

Study: Symmetry

Learn about reflectional symmetry and line of symmetry and explore an example of an isosceles triangle. Learn about rotational symmetry, point of symmetry, and the symmetry of a human face.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Symmetry

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 4: TESSELLATIONS

Study: Tessellations

Learn the definition and explore examples of tessellations. Discover the chessboard as an example of a regular tessellation. Learn about semiregular tessellations.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Tessellations

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 5: FRACTALS

Study: Fractals

Learn about self-similarity of fractals; the golden rectangle; making a Sierpinski triangle; the Koch curve; Cantor dust; examples of infinite length in nature; Zeno's paradox; self-similarity in biological organisms; fern fractals; Mandelbrot sets; fractals and recursion; and fractional dimension.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Fractals

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 6: LOCUS OF POINTS

Study: Locus of Points

Learn about defining objects in terms of points and given distances. Explore examples of a parabola and bisecting angles.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Locus of Points

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 7: NON-EUCLIDEAN GEOMETRY

Study: Non-Euclidean Geometry

Learn about the Playfair axiom (parallel postulate); examples of non-Euclidean geometry; Georg Friedrich Bernhard Riemann's negation; great circles; Nikolai Ivanovich Lobachevsky's negation; hyperbolic geometry; Henri Poincaré's disk; Euclidean geometry as a subset of a complete geometric system; and characteristics of spherical and hyperbolic geometry.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Non-Euclidean Geometry

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 8: IMPOSSIBLE PROBLEMS FROM ANTIQUITY

Study: Impossible Problems from Antiquity

Learn about the Delian problem (doubling a cube) and trisecting an angle.

Duration: 0 hrs 40 mins Scoring: 0 points

Quiz: Impossible Problems from Antiquity

Take a quiz to check your understanding of what you have learned.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 9: CONSTRUCTIONS WRAP-UP

Practice: Assignment

Submit your work for a set of 20 practice problems.

Duration: 0 hrs 50 mins Scoring: 100 points

Review: Topics in Geometry

Get ready for the unit test by reviewing important ideas and skills.

Duration: 0 hrs 30 mins Scoring: 0 points

Discuss: Applying What You've Learned

Join a three- to five-question discussion to practice methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Topics in Geometry

Take a computer-scored test to check what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 50 points

Test (TS): Topics in Geometry

Take a teacher-scored test to check what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 10: DIAGNOSTIC

Diagnostic: Topics in Geometry

Take a diagnostic test that will create a study plan based on your answers.

Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 12: GEOMETRY SEMESTER 2 REVIEW AND EXAM

LESSON 1: GEOMETRY SEMESTER 2

Review: Geometry Semester 2

Get ready for the exam by reviewing important ideas and skills covered in this semester.

Duration: 1 hr Scoring: 0 points

Exam: Geometry Semester 2

Take a computer-scored exam to show what you have learned in this semester.

Duration: 0 hrs 50 mins Scoring: 200 points