

Honors Geometry
West Aurora School District
State Goal 7 – Measurement

STATE GOAL 7 – Estimate, make and use measurement of objects, quantities and relationships and determine acceptable levels of accuracy.

Concepts: Need to Know About Measurement

- Common Geometric Figure Measurements
 - Length, Width, Height
 - Perimeter/Circumference
 - Area
 - Volume
 - Surface Area
 - Angle Measures (and Sums of Angles)

Skills: Be Able to Do

- **Determine** (Common Geometric Figure Measurements)
- **Calculate** (Common Geometric Figure Measurements)

Topics or Contexts: Various lessons in textbook

Supplementary worksheets

Big Ideas

Essential Questions

Honors Geometry
West Aurora School District
State Goal 8 – Algebra

STATE GOAL 8 – Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.

Concepts: Need to Know About Algebra

- Systems of Equations and Inequalities
- Circle Equations

Skills: Be Able to Do

- **Solve** (Systems of Equations and Inequalities)
- **Identify** (Equations of Circles)
- **Interpret** (Equations of Circles)
- **Write** (Equations of Circles)

Topics or Contexts: Review the families of functions. Compare and contrast families of functions with the circle family.

Translate between graphical and algebraic representations of circles.

Review plotting and identifying points on a coordinate plane.

Review graphing lines and inequalities on a coordinate plane.

Various lessons in textbook

Big Ideas

Essential Questions

Honors Geometry
West Aurora School District
State Goal 9 – Geometry

STATE GOAL 9 – Use geometric methods to analyze, categorize and draw conclusions about points, lines, planes, and space.

Concepts: Need to Know About Geometry

- Pythagorean Theorem
- Geometric Properties of Plane Figures
 - Triangles
 - Quadrilaterals
 - Parallel Lines Cut by a Transversal
 - Angles
 - Diagonals
 - Triangle Inequalities
- Coordinate Geometry
 - Distance
 - Midpoint
 - Slope
- Geometric Relationships of Circles
 - Arcs
 - Chords
 - Tangents
 - Secants
 - Angles
- Similar Figures
- Triangle Congruence
- Mathematical Axioms
- Geometrical Axioms
- Fundamental Theorems of Geometry
- Deductive Reasoning
- Right Triangles
 - Properties
 - Special Right Triangles
- Trigonometric Ratios

Skills: **Be Able to Do**

- **Apply** (Pythagorean Theorem, Geometric Properties of Plane Figures, Geometric Relationships of Circles, Mathematical and Geometric Axioms, Fundamental Theorems of Geometry, and Deductive Reasoning)
- **Identify** (Geometric Properties of Plane Figures, Geometric Relationships of Circles, and Trigonometric Ratios)
- **Classify** (Geometric Properties of Plane Figures)
- **Solve** (Problems involving Geometric Properties of Plane Figures, Problems using Coordinate Geometry, Problems involving Geometric Relationships of Circles, Problems with Similar Figures, Triangle Congruence Problems, and Right Triangles)
- **Recognize** (Mathematical and Geometric Axioms, Fundamental Theorems of Geometry, and Deductive Reasoning)
- **Define** (Trigonometric Ratios)
- **Evaluate** (Trigonometric Ratios)
- **Determine** (Similar Figures)
- **Use** (Properties of Right Triangles)

Topics or Contexts: Various lessons in textbook

Supplementary worksheets

Big Ideas

Essential Questions