Title _____CP Geometry_____

Unit:	Geometric Structures						
Big Ideas:	Basic Geometric Structures: building blocks of Geometry						
Unit Essential Questions:	What are the tools of Geometry? How is the subject of Geometry built off of these basic tools and concepts?						
Concept & Pacing	**Pa Core Standard**	**Key Vocabulary**	**Essential Questions**	**Competencies (skills, knowledge, abilities)**	**Mini-Lessons/Activities**	**Instructional Materials**	**Assessments**
Points, Lines, and Planes **2 day**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Geometry, Points, Lines, Planes, Collinear, Coplanar	What are the undefined terms of Geometry? What are some attributes of geometric drawings?	Define and illustrate the basic geometric terms. Identify the terms in various drawings.	Lecture Examples Real-world identification of objects through physical displays Practice problems	Chapter packet Classroom objects	Homework
Linear Measurement and precision **2 day**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Segment, Ray, Line segment, Congruent, Segment Addition Postulate, Precision	How is the Segment Addition Postulate used to interpret geometric objects? How can geometric properties be used to describe relations? How is precision calculated?	Use the Segment Addition Postulate to solve for segment lengths. Identify and describe geometric objects and drawing. Calculate precision of a measurement	Lecture Examples Discussion on the use of precision in the fields of science and construction Practice problems	Chapter packet	Homework Quiz 1.1 – 1.2
Distance and Midpoint **2 day**	CC.2.3.HS.A.10 CC.2.3.HS.A.11	Distance, Midpoint, Segment Bisector	How can geometric properties be used to describe and analyze situations?	Calculate the distance on a number line or between two points. Calculate the midpoint on a number line or between two points. Given the midpoint and endpoint of a segment, find the other midpoint.	Lecture Examples Map plotting activity Practice problems	Chapter packet	Homework
Angle Measure **3 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3	Angles, Vertex, Sides, Acute, Right, Obtuse, Straight, Opposite Rays, Protractor	How can geometric properties be used to describe and analyze situations?	How are angles named and classified? What are the attributes of various angles?	Lecture Examples Hands on angle measuring worksheet Discussion on the uses of measuring angles correctly Practice problems	Chapter packet Protractors	Homework Quiz 1.1 – 1.4
Angle Relationships **2 day**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3	Complementary Angles, Supplementary Angles, Linear Pair, Adjacent Angles,	How can geometric properties be used to describe and analyze situations?	What are the relationships of the various types of angle pairs? What defines lines as being perpendicular?	Lecture Examples Practice problems ASN points …. Angles	Chapter packet Protractors ASN points … Angles	Homework

		Vertical Angles, Vertical Angle Theorem, Perpendicular Lines				
Polygons **2 day**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3	Polygon, Concave, Canvex, Equilateral, Equiangular, Regular, Area, Perimeter	How can the application of attributes of geometric shapes support mathematical reasoning?	Identify polygons by name and properties they contain.	Lecture Examples Practice problems	Chapter packet	Homework
Three-Dimensio nal Figures **2 day**	CC.2.3.HS.A.1 2 CC.2.3.HS.A.1 3	Polyhedron, Faces, Edges, Vertices, Prism, Pyramid,Cone, Sphere, Cylinder	How can the application of attributes of geometric shapes support mathematical reasoning?	Identify various 3D shapes and their attributes. Apply the appropriate formula to calculate volume and surface area.	Lecture Examples Practice problems	Chapter packet 3D models	Homework
Review **1 day**	(all above)	(all above)	(all above)	(all above)			
Chapter 1 Test **1 day**	(all above)	(all above)	(all above)	(all above)			

18 days

Title _____CP Geometry_____

Unit:	Reasoning and Logic						
Big Ideas:	Patterns and geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.						
Unit Essential Questions:	How can recognizing repetition or regularity assist in solving problems? How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?						

Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Inductive Reasoning and Conjecture 3 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Conjecture, Inductive Reasoning, Counterexample	How can patterns be used to describe relationships in mathematical situations?	Make conjectures based on knowledge and/or reasoning. Provide counterexamples to show conjectures are false.	Lecture Logic puzzles Practice problems	Chapter packet puzzles	Homework
Logic 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Statement, Truth value, Negation, Compound statement, Conjunction, Disjunction, Truth table, Venn diagram	How can logic be used to analyze situations?	Complete truth tables. Reason through situations using logical arguments.	Lecture connect arguments to computer science Practice problems	Chapter packet puzzles	Homework
Conditional Statements 3 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Conditional statement, If-then statement, Conclusion, Hypothesis, Converse, Inverse, Contrapositive	How can recognizing logical processes assist in mathematical reasoning?	Analyze statements in if-then form. Write the converse, inverse, and contrapositive of if-then statements. Determine the truth of conditional statements	Lecture Reasoning activity (lobster) ASN worksheet Practice problems	Chapter packet Activity handouts	Homework Quiz 2.1 – 2.3
Deductive Reasoning 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Deductive reasoning, Valid, Law of Detachment, Law of Syllogism	How can recognizing logical processes assist in mathematical reasoning?	How does deductive reasoning differ from inductive reasoning? Use and apply the reasoning laws.	Lecture Reasoning activity (aliens) Practice problems ASN special angle pairs (review)	Chapter packet Activity handout ASN special angle pairs	Homework
Postulates Two-Column Proofs 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Postulate, Proof, Theorem. Paragraph proof	How can the application of geometric attributes support	Identify and use geometric postulates to aid in the writing of proofs. Use key attributes of proofs to write two-column proofs.	Lecture Multiple proofs both mathematical and logical Logic puzzles	Chapter packet Logic puzzles	Homework

	CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11		mathematical reasoning?		Practice problems		
Algebraic Proofs **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Algebraic proof, 2-column proof, Formal proof	How can algebraic properties be used to illustrate mathematical reasoning?	Identify the property used to justify each step when solving an equation.	Lecture Formal proof practice (algebraic) Practice problems	Chapter packet	Test Quiz 2.4 – 2.6
Proving segment relationships **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11		How can geometric properties and relations support mathematical reasoning?	Identify the property used to justify each step when writing a formal proof..	Lecture Formal proof practice (segments) Practice problems	Chapter packet	Homework
Proving Angle Relationships **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11		How can geometric properties and relations support mathematical reasoning?	Identify the property used to justify each step when writing a formal proof..	Lecture Formal proof practice (angles) Practice problems	Chapter packet	Homework
Review **2 days**	(all above)	(all above)	(all above)	(all above)			
Chapter 2 Test **1 day**	(all above)	(all above)	(all above)	(all above)			

21 days

Title _____CP Geometry_____

Unit:	Parallel and Perpendicular Lines						
Big Ideas:	Patterns exhibit relationships that can be extended, described and generalized. Geometric relationships can be described, analyzed, and classified based on spatial reasoning or visualization.						
Unit Essential Questions:	How are angles related when lines are cut by transversals? How is algebra applied to verify geometric theorems and properties?						
Concept & Pacing	**Pa Core Standard**	**Key Vocabulary**	**Essential Questions**	**Competencies (skills, knowledge, abilities)**	**Mini-Lessons/Activities**	**Instructional Materials**	**Assessments**
Parallel Lines and Transversals 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3	Parallel lines, Parallel planes, Skew lines, Transversal, Interior angles, Exterior angles, Consecutive angles, Alternate interior/exterior angles, Corresponding angles	How can the application of the attributes of geometric shapes support mathematical reasoning?	Identify angles formed by lines cut by a transversal. Recognize the different types of lines in drawing	Lecture Construct of drawing Transversals activity (extra) Practice problems Doodle notes (if needed)	Chapter packet rulers Paper Activity Doodle notes	Homework
Angles and Parallel Lines 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3		What are the relations between the angles formed by parallel lines cut by a transversal?	Determine when angles are congruent or supplementary. Apply algebra to geometric situations.	Lecture Create own pictures to trade with others to practice Practice problems	Chapter packet rulers paper	Homework
Slopes of Lines 3 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.11	Slope, Rate of change	How can the application of algebraic methods be applied to geometric situations?	Calculate slope in geometric situations Apply the concept of slope to determine parallel or perpendicular	Lecture Practice problems	Chapter packet	Homework Quiz 3.1 – 3.3
Equations of Lines 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.11	Slope-intercept form, Point-slope form	How can the application of algebraic methods be applied to geometric situations?	Write equations for lines in various forms. Identify if lines are parallel or perpendicular	Lecture Practice problems	Chapter Packet	Homework
Proving Lines Parallel 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.11		How can the application of the attributes of geometric shapes support mathematical reasoning?	Prove lines are parallel Use formal proofs Apply algebra to show lines are parallel	Lecture Practice problems (proofs) Proofs with || lines (if needed)	Chapter packet || line proofs	Homework

Perpendiculars and Distance 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.11	Equidistant	How can the application of algebraic methods be applied to geometric situations?	Calculate perpendicular lines and distances. Determine the distance between parallel lines	Lecture Practice problems	Chapter packet rulers	Homework
Review 2 days	(all above)	(all above)	(all above)	(all above)			
Chapter 3 Test 1 day	(all above)	(all above)	(all above)	(all above)			

16 days

Title _____CP Geometry_____

Unit:	Congruent Triangles						
Big Ideas:	Describe, analyze, and classify triangle relationships based on spatial reasoning and visualization.						
Unit Essential Questions:	How are triangles congruent based on the application of the attributes of geometric shapes?						

Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Classifying Triangles **1 day**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Acute triangle, Equilateral triangle, Obtuse triangle, Right triangle, Equiangular triangle, Isosceles triangle, Scalene triangle	How are geometric attributes used to identify triangles?	Identify and describe different triangles.	Lecture Practice problems Triangle sort Triangle Classifying Activity ASN Triangles	Chapter Packet Sort activity Classify activity ASN Triangles	Homework
Angles of Triangles **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Auxiliary line, Exterior angle, Remote interior angle, Corollary	How can the application of geometric attributes be used to analyze and solve situations?	Apply the Triangle Exterior Angle Theorem	Lecture Practice problems Exterior Angle Inquiry (if needed)	Chapter Packet Exploration material	Homework
Congruent Triangles **3 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Congruent, Congruent polygon, Corresponding parts	How can geometric properties and theorems be used to solve situations?	Show that polygons and triangles are congruent. Know the information needed to prove shapes are congruent	Lecture Practice problems Congruent Triangle activity	Chapter Packet Activity	Homework 4.1 – 4.3 Quiz
Proving Triangles Congruent SSS SAS **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Included angle	How can geometric properties and theorems be used to solve situations?	Identify when the appropriate information is provided to use SSS and SAS. Write formal proofs showing triangles are congruent.	Lecture Practice problems Congruent Triangle Proofs packet	Chapter packet Triangle packet	Homework
Proving Triangles Congruent ASA AAS HL **3 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Included side	How can geometric properties and theorems be used to solve situations?	Identify when the appropriate information is provided to use SSS, SAS, ASA, AAS, and HL. Write formal proofs showing triangles are congruent.	Lecture Practice problems Congruent Triangle Proofs with CPCTC packet	Chapter packet Triangle with CPCTC packet	Homework Group proof presentation
Isosceles and Equilateral Triangles **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4	Legs of isosceles triangle, Vertex angle, Base angle	How can geometric properties and theorems be used to solve situations?	Identify and use the unique properties of isosceles and equilateral triangles.	Lecture Practice problems Congruent Triangle Snowflakes (if time) Angles in Triangles Puzzle	Chapter packet Congruent Triangle Snowflake puzzle	Homework

Title _____CP Geometry_____

Review and Tests 3 days	(all above)	(all above)	(all above)	(all above)		
Chapter 4 Test 1 day	(all above)	(all above)	(all above)	(all above)		

17 days

Title _____CP Geometry_____

Unit:	Relationships in Triangles						
Big Ideas:	The geometric relationship of various centers of a triangle can be described, analyzed, and classified based on spatial reasoning and/or visualization.						
Unit Essential Questions:	How can the application of the geometric attributes of geometric shapes support mathematical reasoning and problem solving?						

Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Bisectors of Triangles **3 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6	Perpendicular bisector, Point of concurrency, Circumcenter, Incenter	How are the applications of spatial relationships used to draw, construct, and solve problems?	Identify and use perpendicular bisectors in triangles. Identify and use angle bisectors in triangles.	Lecture Practice problems Constructions	Chapter packet rulers compasses paper	Homework
Medians and Altitudes of Triangles **3 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6	Median, Centroid, Altitude, Orthocenter	How are the applications of spatial relationships used to draw, construct, and solve problems?	Identify and use medians in triangles. Identify and use altitudes in triangles.	Lecture Practice problems Constructions Triangle Centers Doodle note (if needed)	Chapter packet rulers compasses paper Doodle note	Homework 5.1 – 5.2 Quiz
Inequalities in One Triangle **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6		How are the applications of spatial relationships used to draw, construct, and solve problems?	Recognize and apply properties of inequalities to the measures of the angles of a triangle. Recognize and apply the properties of inequalities to the relationships between the angles and sides in a triangle.	Lecture Practice problems	Chapter packet	Homework
The Triangle Inequality **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6		How are the applications of spatial relationships used to draw, construct, and solve problems?	Use the Triangle Inequality Theorem to identify possible triangles. Prove triangle relationships using the Triangle Inequality Theorem.	Lecture Practice problems	Chapter packet	Homework
Inequalities in Two Triangles **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6		How are the applications of spatial relationships used to draw, construct, and solve problems?	Apply the Inequalities in Two Triangles Theorem or its converse to make comparisons in two triangles. Prove triangle relationships using the theorem or its converse.	Lecture Practice problems	Chapter packet	Homework
Review **2 days**	(all above)	(all above)	(all above)	(all above)			

Chapter 5 Test 1 day	(all above)	(all above)	(all above)	(all above)			

15 days

Title _____CP Geometry_____

Unit:	Quadrilaterals						
Big Ideas:	Geometric relationships of quadrilaterals can be described, analyzed, and classified based on spatial reasoning and/or visualization.						
Unit Essential Questions:	How are spatial relationships including shape, used to draw, construct, model, and represent real situations or solve problems? How can the application of geometric attributes support mathematical reasoning and problem solving?						

Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Angles of Polygons 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11 CC.2.3.HS.A.14	Diagonal	How can the application of geometric attributes of geometric shapes support mathematical reasoning and problem solving?	Find and use the sum of the measure of interior angles of polygons. Find and use the sum of the measures of the exterior angles of a polygon.	Lecture Practice problems	Chapter packet	Homework
Parallelograms 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11 CC.2.3.HS.A.14	Parallelogram	How can the application of geometric attributes of geometric shapes support mathematical reasoning and problem solving?	Recognize and apply properties of the sides and angles of a parallelogram. Recognize and apply properties of the diagonals of parallelograms.	Lecture Practice problems Quadrilateral Proofs	Chapter packet Proofs	Homework
Tests for Parallelograms 3 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11 CC.2.3.HS.A.14		How can the application of geometric attributes of geometric shapes support mathematical reasoning and problem solving?	Recognize the conditions that ensure a quadrilateral is a parallelogram. Prove that a set of points forms a parallelogram in the coordinate plane.	Lecture Practice problems	Chapter packet	Homework Quiz 5.1 – 5.3
Rectangles 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11 CC.2.3.HS.A.14	Rectangle	How can the application of geometric attributes of geometric shapes support mathematical reasoning and problem solving?	Recognize and apply properties of rectangles. Determine whether parallelograms are rectangles.	Lecture Practice problems Quadrilateral Proofs	Chapter packet Proofs	Homework
Rhombi and Squares 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5	Rhombus, Square	How can the application of geometric attributes of geometric shapes support	Recognize and apply properties of rhombi and squares. Determine whether quadrilaterals are rectangles, rhombi, or squares.	Lecture Practice problems Quadrilateral Proofs	Chapter packet Proofs	Homework

	CC.2.3.HS.A.6 CC.2.3.HS.A.11 CC.2.3.HS.A.14		mathematical reasoning and problem solving?				
Trapezoids and kites **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11 CC.2.3.HS.A.14	Trapezoid, Kite	How can the application of geometric attributes of geometric shapes support mathematical reasoning and problem solving?	Apply properties of trapezoids. Apply properties of kites.	Lecture Practice problems	Chapter packet	Homework
Review **2 days**	(all above)	(all above)	(all above)	(all above)			
Chapter 6 Test **1 day**	(all above)	(all above)	(all above)	(all above)			

16 days

Title _____CP Geometry_____

Unit:	Proportions and Similarity						
Big Ideas:	Patterns exhibit relationships that can be extended, described, and generalized. Geometric relationships can be described analyzed, and classified based on spatial reasoning and/or visualization.						
Unit Essential Questions:	How can patterns be used to describe geometric relations? How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?						
Concept & Pacing	**Pa Core Standard**	**Key Vocabulary**	**Essential Questions**	**Competencies (skills, knowledge, abilities)**	**Mini-Lessons/Activities**	**Instructional Materials**	**Assessments**
Ratios and proportions 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Ratio, Proportion, Cross product	How can the concept of proportions be applied to geometric shapes?	Write ratios. Write and solve proportions.	Lecture Practice Problems	Chapter packet	Homework
Similar Polygons 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Similar polygon, Similar ratio, Scale factor	How can the application of geometric attributes support mathematical reasoning and problem solving?	Use proportions to identify similar polygons. Solve problems using the properties of similar polygons.	Lecture Practice Problems	Chapter packet	Homework
Similar Triangles 3 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11		How can the application of geometric attributes support mathematical reasoning and problem solving?	Identify similar triangles using the AA~ Postulate, and the SSS and SAS ~ Theorems. Use similar triangles to solve problems.	Lecture Practice Problems Similar Triangle Proofs	Chapter packet Similar Triangle Proofs	Homework Quiz 7.1 – 7.3
Parallel Lines and Proportional Parts 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Midsegment of a triangle	How can recognizing repetition or regularity assist in solving problems more efficiently?	Use proportional parts within triangles. Use proportional parts with parallel lines.	Lecture Practice Problems	Chapter packet	Homework
Parts of Similar Triangles 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6		How can patterns be used to describe relationships in mathematical situations?	Recognize and use proportional relationships of corresponding angle bisectors, altitudes, and medians of similar triangles.	Lecture Practice Problems	Chapter packet	Homework

	CC.2.3.HS.A.11						
Scale Drawings and Models **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.3.HS.A.6 CC.2.3.HS.A.11	Scale model. Scale drawing, Scale	How can geometric properties be used to analyze situations?	Interpret scale models. Use scale factors to solve problems.	Lecture Practice Problems	Chapter packet	Test
Review **2 days**	(all above)	(all above)	(all above)	(all above)			
Chapter 7 Test **1 day**							

16 days

Unit:	Right Triangles and Trigonometry						
Big Ideas:	Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.						
Unit Essential Questions:	How can recognizing repetition or regularity assist in solving problems more efficiently? How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?						
Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Geometric Mean **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.7 CC.2.2.HS.C.9	Geometric mean	How can patterns be used to describe relationships in mathematical situations?	Find the geometric mean between two numbers. Solve problems involving relationships between parts of a right triangle and the altitude to its hypotenuse.	Lecture Practice Problems	Chapter packet	Homework
The Pythagorean Theorem and Its Converse **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.7 CC.2.2.HS.C.9	Pythagorean triple	How can the application of geometric attributes support mathematical reasoning and problem solving?	Use the Pythagorean Theorem. Use the Converse of the Pythagorean Theorem.	Lecture Practice Problems	Chapter packet	Homework
Special Right Triangles **3 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.7 CC.2.2.HS.C.9		How can the application of geometric attributes support mathematical reasoning and problem solving?	Use the properties of 45-45-90 triangles. Use the properties of 30-60-90 triangles.	Lecture Practice Problems	Chapter packet	Homework 8.1 – 8.3 Quiz
Trigonometry **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.7 CC.2.2.HS.C.9	Trigonometry, Trigonometric ratio, Sine, Cosine, Tangent, Inverse sine, Inverse cosine, Inverse tangent	How can geometric properties and theorems be used to describe, model, and analyze situations?	Find trigonometric ratios using right triangles. Use trigonometric ratios to find the angle measure in right triangles.	Lecture Practice Problems	Chapter packet	Homework
Angles of Elevation and Depression **2 days**	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.7 CC.2.2.HS.C.9	Angle of elevation, Angle of depression	How can the application of geometric attributes support mathematical reasoning and problem solving?	Solve problems involving angles of elevation and depression. Use angles of elevation and depression to find the distance between two objects.	Lecture Practice Problems	Chapter packet	Homework

Title _____CP Geometry_____

The Law of Sines and Law of Cosines 3 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.7 CC.2.2.HS.C.9	Law of Sines, Law of Cosines	How can the application of geometric attributes support mathematical reasoning and problem solving?	Use the Law of Sines to solve triangles. Use the Law of Cosines to solve triangles.	Lecture Practice Problems	Chapter packet	Homework
Review 2 days	(all above)	(all above)	(all above)	(all above)			
Chapter 8 Test 1 day	(all above)	(all above)	(all above)	(all above)			

17 days

Title _____CP Geometry_____

Unit:	Circles						
Big Ideas:	Patterns exhibit relationships that can be extended, described, and generalized. Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.						
Unit Essential Questions:	How can recognizing repetition of regularity assist in solving problems more efficiently? How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?						

Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Circles and Circumference 2 days	CC.2.3.HS.A.3 CC.2.3.HS.A.8 CC.2.3.HS.A.9	Center, Circle, Chord, Diameter, Radius, Concentric circles, Circumference, Pi, Inscribed, Circumscribed	How can patterns be used to describe relationships in mathematical situations?	Identify and use parts of circles. Solve problems involving the circumference of a circle.	Lecture Practice Problems	Chapter packet	Homework
Measuring Angles and Arcs 2 days	CC.2.3.HS.A.3 CC.2.3.HS.A.8 CC.2.3.HS.A.9	Central angle, Arc, Minor arc, Major arc, Semicircle, Congruent arcs, Adjacent arcs, Arc length	How can patterns be used to describe relationships in mathematical situations?	Identify central angles, major arcs, minor arcs, and semicircles, and find their measures. Find arc lengths.	Lecture Practice Problems	Chapter packet	Homework
Arcs and Chords 3 days	CC.2.3.HS.A.3 CC.2.3.HS.A.8 CC.2.3.HS.A.9		How can patterns be used to describe relationships in mathematical situations?	Recognize and use relationships between arcs and chords. Recognize and use relationships between arcs, chords, and diameters.	Lecture Practice Problems	Chapter packet	Homework Quiz 10.1 – 10.3
Inscribed Angles 2 days	CC.2.3.HS.A.3 CC.2.3.HS.A.8 CC.2.3.HS.A.9	Inscribed angle, Intercepted arc	How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?	Find measures of inscribed angles. Find measures of angles of inscribed polygons.	Lecture Practice Problems	Chapter packet	Homework
Tangents 2 days	CC.2.3.HS.A.3 CC.2.3.HS.A.8	Tangent,	How can the application of the	Use properties of tangents.	Lecture Practice Problems	Chapter packet	Homework

	CC.2.3.HS.A.9	Point of tangency, Common tangent	attributes of geometric shapes support mathematical reasoning and problem solving?	Solve problems involving circumscribed polygons.			
Secants, Tangents, and Angle Measures **3 days**	CC.2.3.HS.A.3 CC.2.3.HS.A.8 CC.2.3.HS.A.9	Secant	How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?	Find measures of angles formed by lines intersecting on or inside a circle. Find measures of angles formed by lines intersecting outside the circle.	Lecture Practice Problems	Chapter packet	Homework Quiz 10.4 – 10.6
Special Segments in a Circle **2 days**	CC.2.3.HS.A.3 CC.2.3.HS.A.8 CC.2.3.HS.A.9	Chord segment, Secant segment, External secant segment, Tangent segment	How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?	Find measures of segments that intersect in the interior of a circle. Find measures of segments that intersect in the exterior of a circle.	Lecture Practice Problems Circle proofs ASN Circles	Chapter packet Proofs ASN worksheet	Homework
Review **2 days**	(all above)	(all above)	(all above)	(all above)			
Chapter 10 Test **1 day**	(all above)	(all above)	(all above)	(all above)			

19 days

Unit:	Transformations and Symmetry						
Big Ideas:	Patterns exhibit relationships that can be extended, described, and generalized. Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.						
Unit Essential Questions:	How can patterns be used to describe relationships in mathematical situations? How are spatial relationships including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?						

Concept & Pacing	Pa Core Standard	Key Vocabulary	Essential Questions	Competencies (skills, knowledge, abilities)	Mini-Lessons/Activities	Instructional Materials	Assessments
Reflections 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.2.HS.C.11	Line of reflection	How are spatial relationships including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?	Dra reflections. Draw reflections in the coordinate plane.	Lecture Practice Problems	Chapter packet	Homework
Translations 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.2.HS.C.11	Translation vector	How are spatial relationships including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?	Draw translations. Draw translations in the coordinate plane.	Lecture Practice Problems	Chapter packet	Homework
Rotations 3 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.2.HS.C.11	Center of rotation, Angle of rotation	How are spatial relationships including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?	Draw rotations. Draw rotations in the coordinate plane.	Lecture Practice Problems	Chapter packet	Homework Quiz 11.1 – 11.3
Compositions of Transformations 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.2.HS.C.11	Composition of transformations, Glide reflections	How can patterns be used to describe relationships in mathematical situations?	Draw glide reflections and other compositions of isometries in the coordinate plane. Draw compositions of reflections in parallel and intersecting lines.	Lecture Practice Problems	Chapter packet	Homework
Symmetry 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.2.HS.C.11	Symmetry, Line symmetry, Line of symmetry, Rotational symmetry,	How are spatial relationships including shape and dimension, used to draw, construct, model, and represent	Identify line and rotational symmetries in two-dimensional figures. Identify plane and axis symmetries in three-dimensional figures.	Lecture Practice Problems	Chapter packet	Homework

		Center of symmetry, Order of symmetry	real situations or solve problems?				
Dilations 2 days	CC.2.3.HS.A.1 CC.2.3.HS.A.2 CC.2.3.HS.A.3 CC.2.3.HS.A.4 CC.2.3.HS.A.5 CC.2.2.HS.C.11		How can patterns be used to describe relationships in mathematical situations?	Draw dilations. Draw dilations in the coordinate plane.	Lecture Practice Problems	Chapter packet	Homework
Review 2 days	(all above)	(all above)	(all above)	(all above)			
Chapter 11 Test 1 day	(all above)	(all above)	(all above)	(all above)			

16 days

Unit:	Final Exam						
Big Ideas:	Review all of CP Geoometry						
Unit Essential Questions:	All previous essential questions						
Concept & Pacing	**Pa Core Standard**	**Key Vocabulary**	**Essential Questions**	**Competencies (skills, knowledge, abilities)**	**Mini-Lessons/Activities**	**Instructional Materials**	**Assessments**
Final Exam Review 4 days	(all chapters)	(all chapters)	(all chapters)	(all chapters)			
Geometry Final Exam 1 day	(all chapters)	(all chapters)	(all chapters)	(all chapters)			

5 days

Total 176 days