

REGENTS GEOMETRY LAB SYLLABUS

UNIT 9: PLANAR FIGURES

YOU WILL NEED GRAPH PAPER FOR THIS UNIT! BE SURE TO SHOW ALL WORK

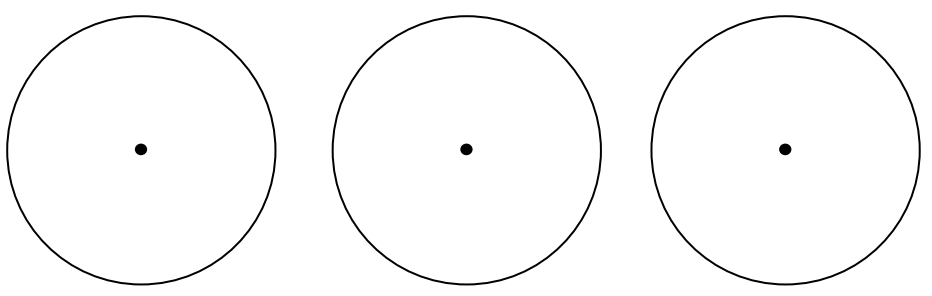
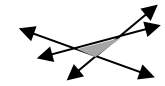
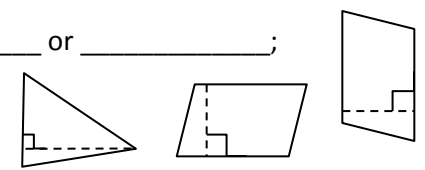
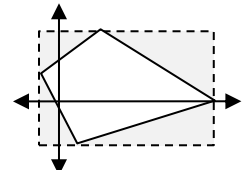
LESSON (DATE)	TOPIC	BOOK/ VIDEO	CCLS	HOMEWORK
9-1	Angles in Polygons: Interior, Exterior	6-1		WORKSHEET 9-1
9-2	Perimeter and Area Formulas of Simple Polygons and Composite Figures	9-1	G.M.G.1 G.M.G.3	WORKSHEET 9-2L
9-3	Perimeter and Area Formulas of Circles and Composite Figures	9-2 9-3	G.M.G.1 G.M.G.3	WORKSHEET 9-3L
9-4	Quiz; Central Angles; Rotating Polygons	9-2	G.M.G.1 G.CO.D.13	WORKSHEET 9-4L
9-5	Inscribed Regular Polygon Constructions; Area of a Regular Polygon (Composite)	9-2	G.M.G.1	WORKSHEET 9-5L
9-6	Applications of Composite Area and Perimeter Problems	9-3	G.M.G.1 G.GPE.7	P 609-611 #6, 10, 13, 23
9-7	Area and Perimeter in the Coordinate Plane	9-4	G.M.G.1 G.GPE.7	P 619 #6, 7, 8, 13, 20, 25 <u>all on graph paper</u>

Although there is no final assessment for this unit, you will be responsible for applying the formulas and techniques in unit 10.



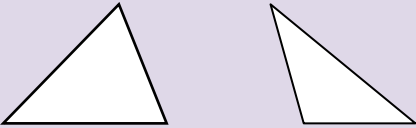


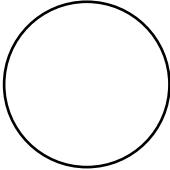
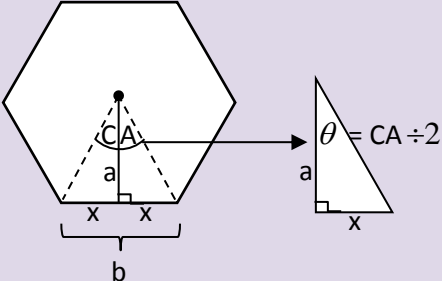
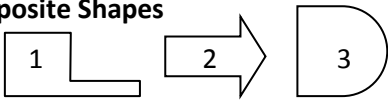
GEOMETRY LAB CLASS LESSON SUMMARIES FOR UNIT 9

NAME _____

DAY	MAIN POINTS / FORMULAS TO REMEMBER			QUESTIONS AFTER HMWK
9-1	Polygon Angles:	Interior	Exterior	
	Sum			
	Each (only if regular)			
	Draw a convex regular polygon w/ exterior angle:	Draw a convex irregular polygon w/ exterior angle:		

<p>9-2</p>	<ul style="list-style-type: none"> • Complete <i>Summary of Area Formulas</i> through “Trapezoid” • Note: finding missing dimensions could involve using <ul style="list-style-type: none"> ○ _____ w/Pythag Thm, Geom Mean, Trig, or Special Rt Δ’s ○ _____ from similar triangles ○ _____ from congruent triangles ○ _____ of isosceles triangles 	
<p>9-3</p>	<ul style="list-style-type: none"> • Complete <i>Summary of Area Formulas</i> sections “Circles” and “Composite Figures” 	
<p>9-4</p>	<ul style="list-style-type: none"> • Measure of Central Angle = <input type="text"/> where n = number of sides of a polygon • Mapping a polygon onto itself uses the transformation _____ around the _____ of the polygon by a multiple of the measure of the _____ angle. Example: mapping a regular hexagon onto itself would rotate around the center of the hexagon by a multiple of _____. 	
<p>9-5</p>	<ul style="list-style-type: none"> • Construct each of the following inscribed regular polygons: Equilateral Triangle Regular Hexagon Square <div style="display: flex; justify-content: space-around; align-items: center;">  </div> <ul style="list-style-type: none"> • Fill in the “Regular Polygon” on the <i>Summary of Area Formulas</i> 	
<p>9-6</p>	<ul style="list-style-type: none"> • Word problems involve applications of area / perimeter include analyzing _____ and using _____. 	
<p>9-7</p>	<ul style="list-style-type: none"> • Fill in the composite figures on the <i>Summary of Area Formulas</i> • In the coordinate plane, _____ the given points or lines to see the figure.  • Dimensions can be counted if _____ or _____; otherwise, use the distance formula.  • Write an equation for the area of the figure using the box method example: Area_{figure} = <div style="text-align: center;">  </div>	

Summary of Area Formulas

Shape	Area Formula	Notes
Rectangle or Square 	$A = bh$	Base and height must be _____
Parallelogram 	$A = bh$	Base and height must be _____
Triangle 	$A = bh/2$ Where b is the _____ And h is the _____ from the _____	Base and height must be _____ Altitude = height and may fall outside the triangle.
Rhombus 	$A =$ or $A =$ Where d_1 and d_2 are the _____	*Can also be treated as a composite.
Trapezoid 	$A =$ Where b is the _____ And h is the _____	Base and height must be _____ *Can also be treated as a composite.
Circle 	$C =$ $A =$ $R =$ $D =$ Where r is the _____	
Regular Polygon 	$A =$ Because it can be broken into n number of _____ _____	Definition of apothem (a): The distance from the center _____ to the _____ of any side. This is the height of the isosceles triangle. Definition of central angle (CA): Angle with the _____ of the polygon as its vertex and extending through consecutive vertices. To find a central angle = <input style="width: 100px; height: 40px;" type="text"/>
Composite Shapes 	Write equation formula for area of figure 3: $A_{total} =$	Calculate the areas of simple shapes and then sub into equation. _____ or _____ areas as needed.

