## Algebra 8: Geometry Unit Day 3

<u>Working Backwards with Area Formulas</u>: Area formulas can be used to calculate area, but they can also be used to find other variables in the formulas. Use the given areas and you equation solving skills to calculate the missing values. Round to the nearest hundredth if necessary.

Shape Name	Figure/Formula	Calculations	Value of Variable
			Variable
Rectangle  Find the base.	E ∪ Area = 72 cm²		
	Formula		
Triangle	A		
Find the base.	Area = 48 m		
	Formula		
Circle  Find the radius.	Area = 55.13 m <sup>2</sup>		
	Formula		

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Parallelogram	Area = $160 \text{ ft}^2$	
Find the height.	8 ft	
	Formula	
	101111414	
Square		
Find the side.	Area = 25 yd²	
	Formula	
Rectangle	3 yd	
Find the height.	Area = 21 yd²	
	Formula	

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Trapezoid	$A = 77 \text{ ft}^2$	
Find the height.	8 ft h 14 ft	
	Formula	
Parallelogram		
raranciogram		
Find the base.	S G Area = 1750 cm <sup>2</sup>	
	Formula	
Triangle		
Find the height		
	Area = 90 in	
	Formula	
	Torritaia	

Rectangle  Find the base.	Area = 48 in²  Formula	
Circle		
Find the radius.	Area = 219.45 in <sup>2</sup> Formula	
Square		
Find the side.	Area = 196 ft <sup>2</sup> Formula	

Period \_\_\_\_\_

Parallelogram		
Find the height.	22 yd Area =242 yd²	
	Formula	
Regular Polygon		
Find the apothem.		
	Area = 523.32 ft <sup>2</sup>	
	Formula	
Square		
Find the side.	Area = 36 m <sup>2</sup>	
	Formula	

Trapezoid	$A = 39 \text{ cm}^2$	
Find the base.	6 cm	
	Formula	
Triangle		
Find the base.	8 cm	
	Area = 52 cm	
	Formula	
Regular Polygon		
	^	
Find the apothem.	9 <sub>yq</sub>	
	Area = 210.33 yd²	
	Formula	

Period \_\_\_\_\_

Rectangle		
Find the base.	Area = 24 ft <sup>2</sup> 4	
	Formula	
Trapezoid	$A = 84 \text{ in.}^2$	
Find the base.	13 in. 8 in. Formula	
	Formula	
Circle		
Find the radius.	Area = $490.63 \text{ cm}^2$	
	Formula	

Period \_\_\_\_\_

Name	Period	

<u>Pythagorean Theorem and Area:</u> When you do not have all of the information you need to calculate the area of a figure, the Pythagorean Theorem can be a useful tool. Use the Pythagorean Theorem to help you find the areas of the trapezoids.

Figure/Formula	Find the Height	Calculations	Area
28 h 40 24 Formula			
91 h 100 35 120			
Formula			
11 25 8			
Formula			

Name	Period