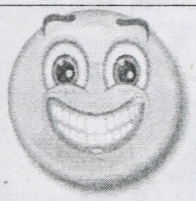
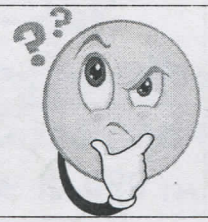
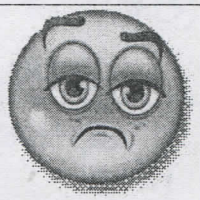
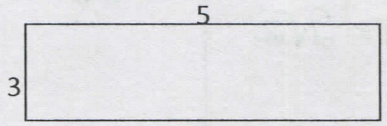
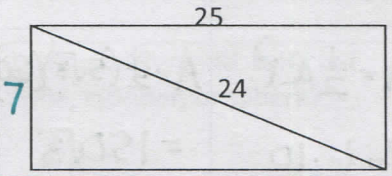
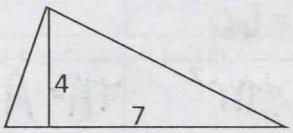
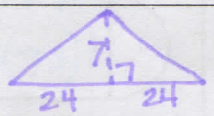
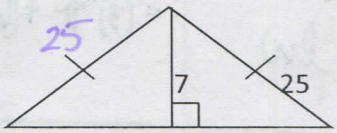
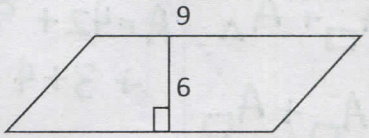
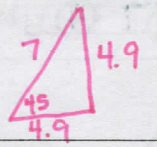
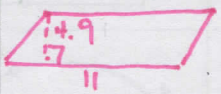
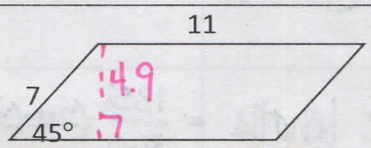
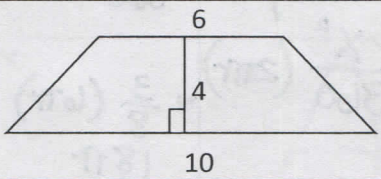
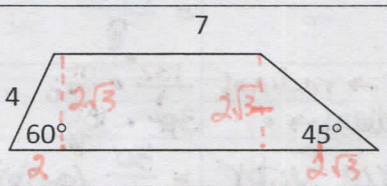
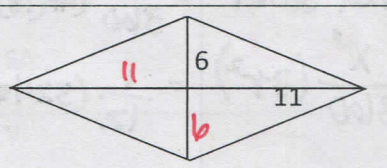
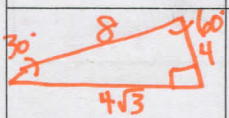
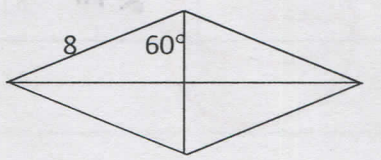
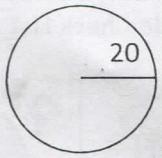
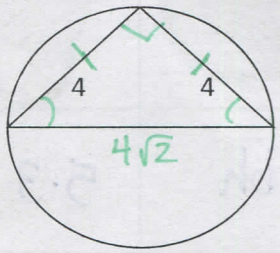
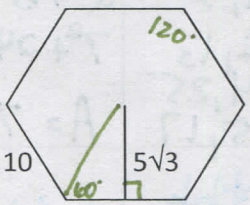
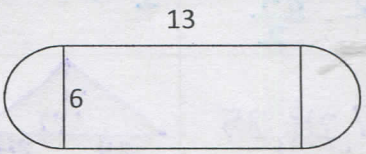
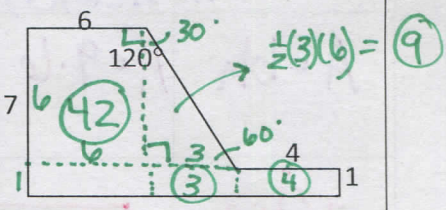
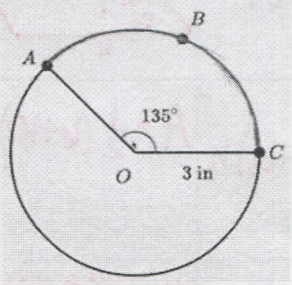
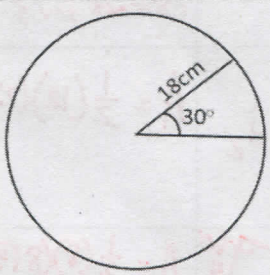
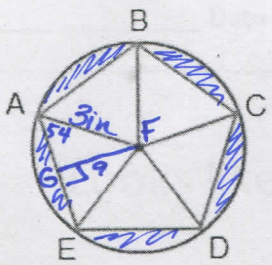
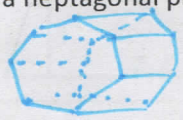
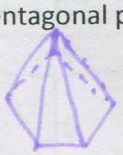
Study Guide Check List Area of Geometric Shapes Name Key Date _____

			CONCEPT	Looks like...
$A = bh$	$5 \cdot 3$	$15\ u^2$	Area of Rectangles	
3, 4, 5 5, 12, 13 7, 24, 25 8, 15, 17	$a^2+b^2=c^2$ $7^2+24^2=25^2$ $A = 7 \cdot 24$	$168\ u^2$ 7 units long	Area of Rectangles using Special Rts or Pyth Triples	
$A = \frac{1}{2}bh$ OR $\frac{bh}{2}$	$\frac{1}{2}(7)(4)$	14 units^2	Area of Triangles	
7, 24, 25	 $A = \frac{1}{2}(48)(7)$	$A = 168\ u^2$	Area of Triangles using Special Rts or Pyth Triples	
$A = bh$	$A = 9 \cdot 6$	$54\ u^2$	Area of Parallelograms	
		$A = (11)(4.9)$ $53.9\ u^2$	Area of Parallelograms using Special Rts or Pyth Triples	
$A = \frac{1}{2}(b_1+b_2)h$	$A = \frac{1}{2}(6+10)4$	$32\ u^2$	Area of Trapezoids	
$A = \frac{1}{2}(b_1+b_2)h$	$\frac{1}{2}(7+9+2\sqrt{3})(2\sqrt{3})$ $\frac{1}{2}(16+2\sqrt{3})(2\sqrt{3})$ $(8+2\sqrt{3})2\sqrt{3}$	$8\sqrt{3}+2(3)$ $(6+8\sqrt{3})\ u^2$	Area of Trapezoids using Special Rts or Pyth Triples	
$A = \frac{1}{2}d_1d_2$	$A = \frac{1}{2}(12)(22)$	$132\ u^2$	Area of Rhombi and Kites	
 $A = \frac{1}{2}d_1d_2$	$A = \frac{1}{2}(8)(8\sqrt{3})$ $= \frac{1}{2}(64\sqrt{3})$	$= 32\sqrt{3}\ u^2$ $\approx 55.4\ u^2$	Area of Rhombi and Kites using Special Rts or Pyth Triples	

$A=\pi r^2$	$A=(20)^2\pi$	$400\pi\ u^2$	Area of Circles	
$A=\pi r^2$ $r=2\sqrt{2}$	$A=\pi(2\sqrt{2})^2$ $=8\pi$	$8\pi\ u^2$	Area of Circles using Special Rts or Pyth Triples	
$A=\frac{1}{2}aP$ $P=6\cdot10$ $=60$	$A=\frac{1}{2}(5\sqrt{3})(60)=150\sqrt{3}\ u^2$ $=150\sqrt{3}$	$\approx 259.8\ u^2$	Area of Regular Polygons	
⊙ $A=\pi r^2$ □ $A=lw$	$TA=A_{\odot}+A_{\square}$ $=(3)^2\pi+(6)(13)$	$=78+9\pi\ u^2$ $\approx 106.274\ u^2$	Area of Composite Shapes	
$A_{\square}+A_{\triangle}$ $+A_{\square}+A_{\square}$	$A=42+9$ $+3+4$	$A=58u^2$		
Arc length $=\frac{x^\circ}{360}(2\pi r)$	$=\frac{135}{360}(2\pi(3))$ $=\frac{3}{8}(6\pi)$ $=\frac{18\pi}{8}$	$=\frac{9\pi}{4}$ in ≈ 7.069 in	Arc Length	 What is the length of arc AC?
° → radians	$\frac{132^\circ}{1}\cdot\frac{\pi}{180}$	$\frac{11}{15}\pi$ radians	Degrees to Radians	132°
radians → °	$3\pi\cdot\frac{180}{\pi}$	540°	Radians to Degrees	3π
Area Sector $=\frac{x^\circ}{360}(\pi r^2)$	$=\frac{30}{360}(\pi(18)^2)$ $=\frac{1}{12}(324\pi)$ $=27\pi$	$=27\pi\ cm^2$ $\approx 84.823\ cm^2$	Area of a Sector	

center = F radius = $\overline{AF}$ apothem = $\overline{GF}$ central angle = $\angle AFB$ Area of ⬠ = $\frac{1}{2}aP$ Area of shaded ○ − ⬠	Area of ⬠ = $\frac{1}{2}aP$ $= \frac{1}{2}(3\sin 54)(5\cos 54)(3)$ $= 22.5(\sin 54)(\cos 54)\text{ in}^2$ $\approx 10.699\text{ in}^2$ $\frac{180(3)}{5} = 108$ $\frac{108}{2} = 54°$	Area of ○ = $\pi r^2 = \pi(3)^2$ $= 9\pi\text{ in}^2 \approx 28.274\text{ in}^2$ Shaded $= 9\pi - 10.699$ $\approx 17.575\text{ in}^2$	Inscribed Polygons (name parts and determine lengths and area)	
Prism & Pyramids have edges faces vertices and bases that are Polygons. Cone, cylinder, & spheres have 0 bases which means not Polygon bases.			Polyhedrons	Prism and Pyramid, WHY not cone, cylinder, or sphere?
Volume = Bh $= (\frac{1}{2}aP)h$	LA = Ph $(7s)h$	TA = $LA + 2B$ $= Ph + 2B$ $= 7(s)h + 2(\frac{1}{2}aP)$	Prisms	Draw a heptagonal prism. (7 sides)  V: LA: SA:
Volume = $\frac{1}{3}Bh$ $= \frac{1}{3}(\frac{1}{2}aP)h$	LA = $\frac{1}{2}Pl$ $= \frac{1}{2}(5)sl$	TSA = $\frac{1}{2}Pl + B$ $= \frac{1}{2}(5s)l + \frac{1}{2}aP$	Pyramids	Draw a pentagonal pyramid.  V: LA: SA:
Volume = $\frac{1}{3}Bh$ $= \frac{1}{3}(\pi r^2)h$	LA = πrl	T = $\pi rl + \pi r^2$	Cones	V: LA: SA: 
Volume = Bh $= (\pi r^2)h$	LA = $Ph = Ch$ $= (2\pi r)h$	T = $LA + 2B$ $= 2\pi rh + 2\pi r^2$	Cylinders	V: LA: SA: 
Volume = $\frac{4}{3}\pi r^3$	LA = ~~Does not exist~~	TSA = $4\pi r^2$	Spheres	V: LA: SA: