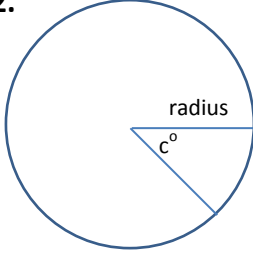**Geometry**

Name_____

Unit 9 Surface Area – Break It Down

Target: I can explain the variables in a surface area formula using proper terminology for parts and operations.

1. **Draw an example figure for each 3-dimensional figure named.**
2. **Label the parts of the figure, such as height, radius, length, width.**
3. **Rewrite the formula next to the figure and then use words to tell what is calculated in the formula. Give a description for what each variable represents.**

**If I were to have followed these directions for finding the area of a sector (in our last unit on area), I would…

Steps 1. & 2.	Step 3. Formula for area of a sector:
radius c^o	$$\pi r^2 \cdot \frac{c^o}{360^o}$$ **Multiply pi by the radius squared, then multiply by the central angle divided by 360.**

Be sure to follow all steps, include as many labels as you can think of (no numbers!) And use a tool to make pictures as clean and clear as you can. Your student ID makes a great straight edge for lines.

Prism (include rectangular base and polygonal base – two separate figures)	
Cylinder	

Pyramid	
Cone	
Sphere	

Quick check – do you have this in your table? Can you tell what each variable represents?

Prisms	Cylinders	Pyramids	Cones	Spheres
$SA = 2B + Ph$	$SA = 2\pi r^2 + 2\pi rh$	$SA = B + \frac{1}{2}Pl$	$SA = \pi r^2 + \pi rl$	$SA = 4\pi r^2$
	(or $SA = 2\pi r^2 + \pi Dh$)			

B = _____   P = _____

r = _____   h = _____

l = _____