


EXPLORE NOTES

Use the Measuring Tool for Distance/Length to  determine the important measurements of each 3D figure. Then calculate the surface area and volume for each object.

Cylinders

	Height	Radius	Surface Area	Volume
<i>Cylinder A</i>				
<i>Cylinder B</i>				
<i>Cylinder C</i>				
<i>Ratio</i>	$\frac{A}{B}$	$\frac{A}{B}$	$\frac{A}{B}$	$\frac{A}{B}$
	$\frac{A}{C}$	$\frac{A}{C}$	$\frac{A}{C}$	$\frac{A}{C}$

Spheres

	Radius	Surface Area	Volume
<i>Sphere A</i>			
<i>Sphere B</i>			
<i>Sphere C</i>			
<i>Ratio</i>	$\frac{A}{B}$	$\frac{A}{B}$	$\frac{A}{B}$
	$\frac{A}{C}$	$\frac{A}{C}$	$\frac{A}{C}$

Reflection Questions

1. How did you know that all of the cylinders (or all of the spheres) were similar to each other?
2. What do you notice about the ratios of the length (radius, height) as compared to the ratios of the surface areas? Why do you think this happens?
3. What do you notice about the ratios of the length (radius, height) as compared to the ratios of the volume? Why do you think this happens?
4. If you were to multiply the radius of a sphere by 4, what would you multiply the surface area by? What would you multiply the volume by?