

V.1: *Surface Area vs. Volume*

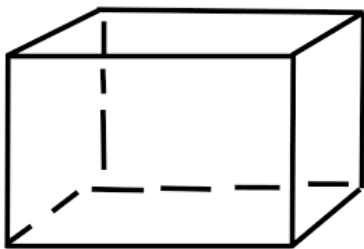
1) What are the similarities and differences between Damien and Sydney's methods?

Similarities	Differences

2) Who best helped Rachel paint the walls of the room? How do you know?

3) Describe the differences between surface area and volume.

4) How much wrapping paper would you need to wrap a box that is 15 in. long, 7 in. wide, and 10 in. tall?



V.2: *Volume of a Cylinder*

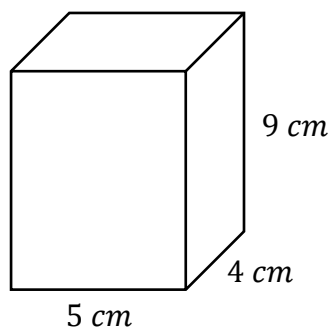
1) What are the similarities and differences between Damien and Sydney's methods?

Similarities	Differences

2) Can two cylinders with different dimensions have the same volume? Explain why or why not.

3) Will Sydney's method of slicing and stacking work for any 3-D shape, or will it only work for cylinders?

4) Find the volume of the following figure.



V.3: *Scale Cylinder Height*

1) What are the similarities and differences between Damien and Sydney's methods?

Similarities	Differences

2) If a cylinder has a height of 9 in. and a volume of 18 in.^3 , what would the new volume be if the height were scaled to 3 in. ?

3) Explain what would happen to the volume of a cylinder if we scaled the height by any number, x .

4) Explain what would happen to the volume of a cone if we scaled the height by any number, x .

V.4: Scale Cylinder Radius

1) What are the similarities and differences between Damien and Sydney's methods?

Similarities	Differences

2) When you scale the height of a cylinder by some number, the volume is multiplied by that number. Why is that NOT true when you scale the radius?

3) If a cylinder has a radius of 3 in. and a volume of 11 in.^3 , what would the new volume be if the radius were scaled to 9 in. ?

4) What happens to the volume of a cylinder if you scale the radius by any number, x ?

V.5: *Composite Figures*

1) What are the similarities and differences between Damien and Sydney's methods?

Similarities	Differences

2) Which of the two methods, Damien's or Sydney's, would you use to solve a problem like this? Why?

3) Describe the process you can use to find the volume of a composite figure.

4) Find the volume of the following figure.

