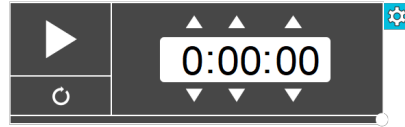


Warm-Up



1. Get out your HW to be checked and to go over it.
2. Turn to your notes from yesterday to finish them.

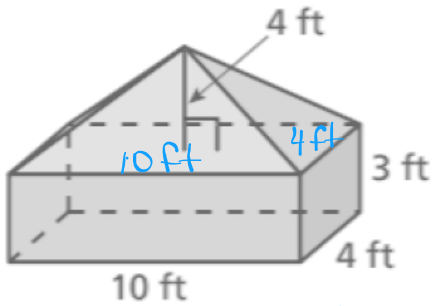
What am I learning today?

Learning Objective 4C.2

How to calculate the composite volume of a figure

5 - zComposite Volumes.notebook

- **Composite Volume** – The volume of MULTIPLE objects added
OR subtracted!



rectangular prism
(bottom)
rectangular pyramid
(top)

$$V = Bh$$

$$V = (Lw)h$$

$$V = (10 \cdot 4)3$$

$$= 120 \text{ ft}^3$$

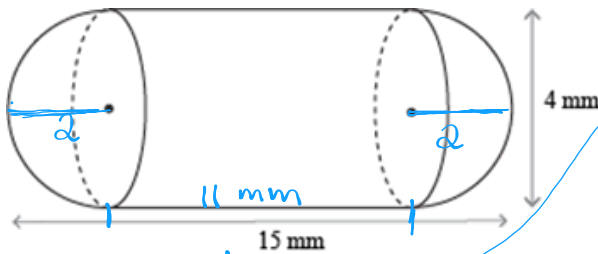
$$V = \frac{1}{3} Bh$$

$$V = \frac{1}{3} (Lw)h$$

$$V = \frac{1}{3} (10 \cdot 4)4$$

$$= 53.3 \text{ ft}^3$$

Total: $120 + 53.3$
 173.3 ft^3



cylinder
sphere

$$V = Bh$$

$$= (\pi r^2)h$$

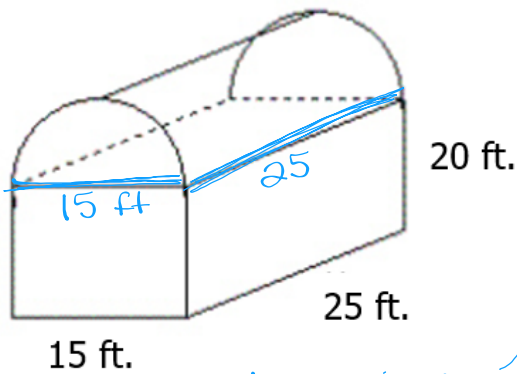
$$= \pi (2)^2 \cdot 11$$

$$= 138.23 \text{ mm}^3$$

$$V = \frac{4}{3} \pi (2)^3$$

$$= 33.51 \text{ mm}^3$$

Total: $138.23 + 33.51$
 $= 171.74 \text{ mm}^3$



15 ft.
 25 ft.
 20 ft.
 25
 15 ft.
 Rectangular prism
 (bottom)
 half cylinder
 (top)

$$V = Bh$$

$$V = (Lw)h$$

$$V = (25 \cdot 15) 20$$

$$= 7500 \text{ ft}^3$$

$$V = Bh$$

$$V = (\pi r^2)h$$

$$V = \pi (7.5)^2 \cdot 25$$

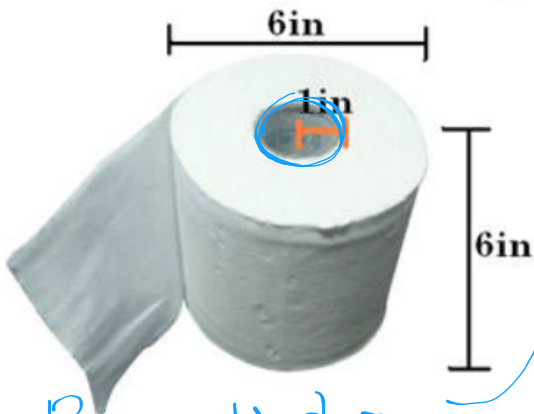
$$= \frac{4417.86 \text{ ft}^3}{2}$$

$$= 2208.93$$

$$\text{Total: } 7500 + 2208.93$$

$$= 9708.93 \text{ ft}^3$$

Find the volume of the toilet paper.



Big cylinder
 Small cylinder

$$V = Bh$$

$$V = \pi (3)^2 \cdot 6$$

$$= 169.65 \text{ in}^3$$

$$V = \pi (0.5)^2 \cdot 6$$

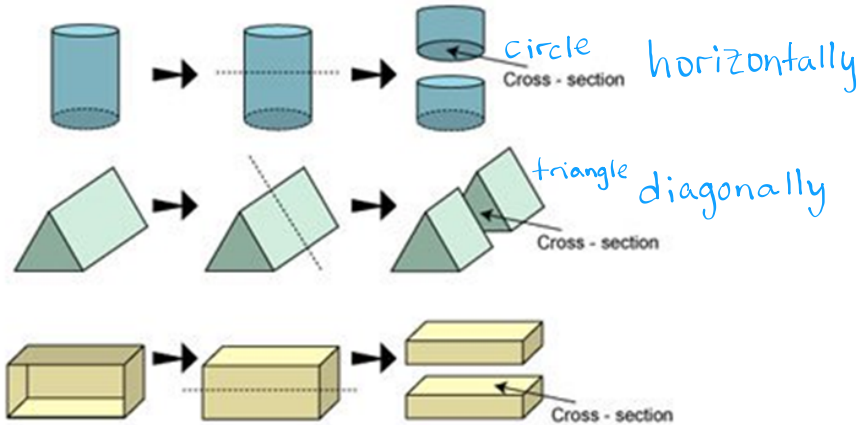
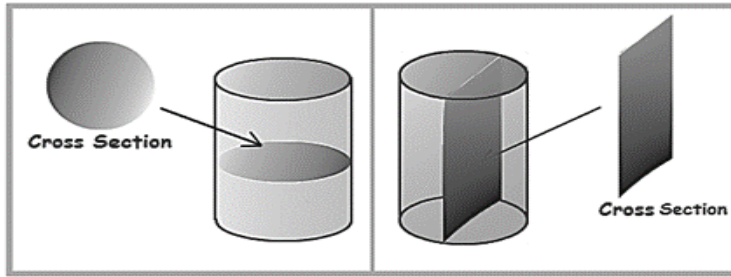
$$= 4.71 \text{ in}^3$$

$$\text{Total: } 169.65 - 4.71$$

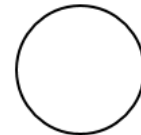
$$= 164.94 \text{ in}^3$$

5 - zComposite Volumes.notebook

- **Cross Sections** – The 2D shape that is created when slicing a 3D shape!



- **Rotations/Stacks** – The 3D shape that is created when rotating or stacking a 2D shape!



2D figure	rectangle	triangle	circle
Stacked Shape	rectangular prism	triangular prism	cylinder
Rotated Shape	cylinder	cone	sphere

Classwork:



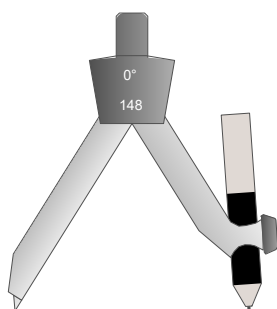
Complete the classwork about volume, composites, cross sections, rotations, and stacks. **SHOW ALL WORK!**

What am I going to do today?

- Grade and discuss Warm-Up
- Take notes on bisecting angles and line segments using constructions
- Practice bisecting angles and line segments using constructions

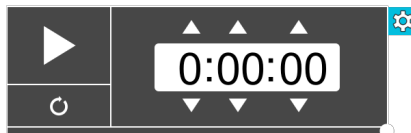
What will I do to show that I have learned it?

I can use a compass and steps to create accurate geometric constructions.



<http://www.mathopenref.com/tocs/constructionstoc.html>

Classwork:



Complete the classwork about copying an angle and copying a line segment.

HW: Watch the construction videos to learn the steps.