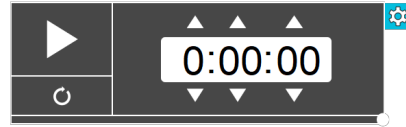


Warm-Up

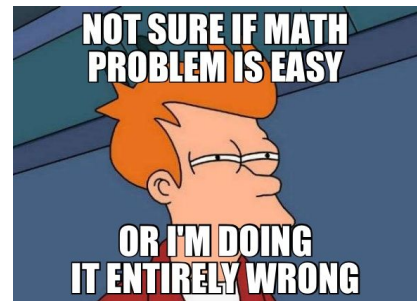


1. Take out your HW to be checked and go over it.
2. ***REMEMBER, I am checking your construction videos HW on FRIDAY!!***

Unit 4B Quiz 1



1. There is **NO communication/eye contact** during a quiz to anyone!
2. When you are **DONE**, put it in the bin.

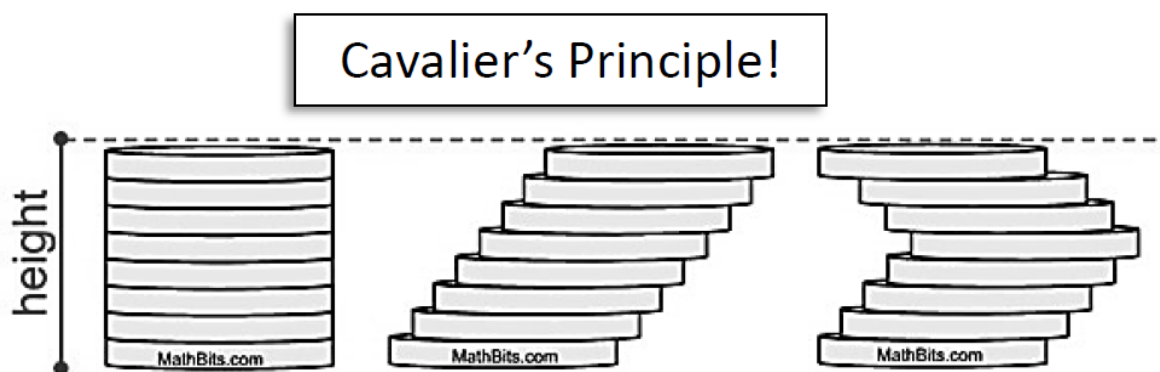


What am I learning today?

Learning Objective 4C.1

How to calculate the volume of a figure.

- **Volume** – Calculates the capacity of an object (how much stuff can it hold)



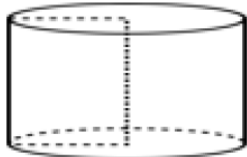
same height, same amount of pieces,
pieces are the same size, cross sections
are parallel = same volume!

4 - zVolume.notebook

- **Prism** – A solid object with two identical ends and flat sides
 $V = Bh$
- **Pyramid** – Has 1/3 of the volume a solid object with two identical ends and flat sides itself
 $V = \frac{1}{3}Bh$
- **Sphere** – Calculates the volume of a 3D circle

$$\frac{4}{3} \pi r^3$$

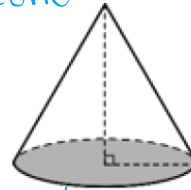
Cylinder



$$V = \underbrace{B}h$$

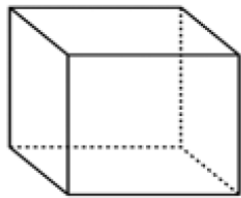
$$V = (\underbrace{\pi r^2}_{\text{circle}})h$$

Cone



$$V = \frac{1}{3} \underbrace{B}h$$

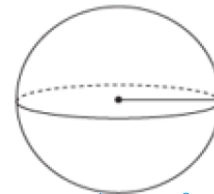
$$V = \frac{1}{3} (\underbrace{\pi r^2}_{\text{circle}})h$$



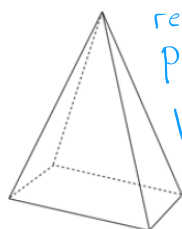
rectangular prism

$$V = \underbrace{B}h$$

$$V = (\underbrace{LW}_{\text{square}})h$$



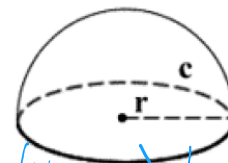
$$V = \frac{4}{3} \pi r^3$$



rectangular pyramid

$$V = \frac{1}{3} \underbrace{B}h$$

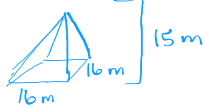
$$V = \frac{1}{3} (LW)h$$



$$V = \left(\frac{4}{3} \pi r^3 \right) \frac{1}{2}$$

4 - zVolume.notebook

1. What is the volume of a square based pyramid with a base side length of 16 meters and a height of 15 meters? ≈ 1280 m³

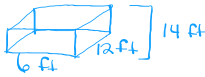


$$V = \frac{1}{3} Bh$$

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

$$V = \frac{1}{3} (16 \cdot 16) 15$$

2. Thelma and David built a recycling bin that is 6 feet wide, 12 feet long, and 14 feet high. How much trash can fit inside of the bin?

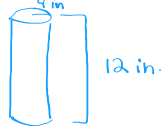


$$V = Bh$$

$$V = (Lw)h$$

$$V = (6 \cdot 12) 14$$

3. A fire extinguisher has a radius of 4 inches and is 12 inches high. How much cubic inches of fluid can it hold?



$$V = Bh$$

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

$$V = (\pi(4)^2) 12$$

$$= 192\pi \text{ in}^3$$

$$\approx 603.2 \text{ in}^3$$

4. A soup can has a diameter of 8 cm and height of 10.5 cm. How much soup can it hold?

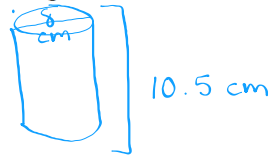
$$V = Bh$$

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

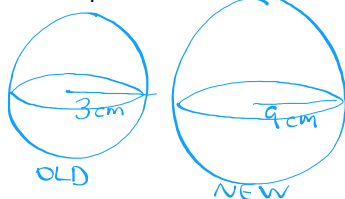
$$\rightarrow \pi(4)^2 \cdot 10.5$$

$$= 168\pi \text{ cm}^3$$

$$\approx 527.8 \text{ cm}^3$$



5. If a sphere has a radius of 3 cm and a new sphere's radius is tripled. What would the new volume be of the new sphere?

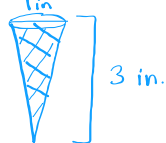


$$\frac{4}{3} \pi (9)^3$$

$$972\pi \text{ cm}^3$$

$$\approx 3053.6 \text{ cm}^3$$

6. If a ice cream cone has a diameter of 1 inch and is 3 inches long. How much ice cream can it hold?



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

$$V = \frac{1}{3} (\pi r^2)h$$

$$V = \frac{1}{3} \pi (0.5)^2 \cdot 3$$

$$= 0.79 \text{ in}^3$$

Classwork:



Complete the classwork about volume.
SHOW ALL WORK!

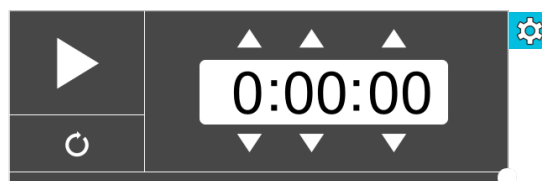
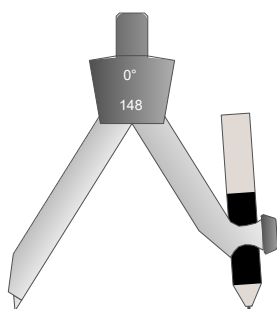
HW: EOC Review #3

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

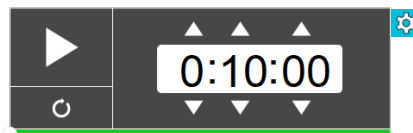
What will I do to show that I have learned it?

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.