Geometry B Live Lesson Class

U6L5 – Volumes of Pyramids and Cones

(Chapter 11-5 in textbook)

Agenda

1. Review topics and problems from U6L5 – Volumes of Pyramids and Cones

2. Use the 2-column note system to take better notes in math class. Bring your math notebook and pen or pencil to each math LiveLesson class.

2-Column Notes Template

1. Announcements/To Do's	1. Write down important details.
2. School-Wide Learner Outcomes	2. What are you going to work on this week?
3. LL Objectives	
4. Vocabulary words	4. Definitions (fill in as we go)
5. Problems	5. Steps to solving problems
6. Summary (End of class)	6. 1 or 2 sentences about the LL class.

Reminders and To – Do's

Information	What to do
1. Complete 1 math lesson per day.	1. Go to your Planner in Connexus to find the math lesson for the day
2. Check your WebMail every day	2. Go to Connexus to find WebMail
3. Be prepared to spend 4 - 6 hours per day on schoolwork.	3. Complete lessons for the day from your Planner. Do not get behind on lessons.
4. Remind your Learning Coach to take daily attendance	4. Have your Learning Coach log into Connexus daily.

Reminders and To – Do's

Information	What to do
5. Go to the Message Board first for information about our math class.	
6. Contact Mr. Elizondo for math questions. Remember: You need at least 2 phone calls with Mr. Elizondo per semester.	6. Call (559) 549 - 3244 and leave a voicemail if call is not answered. Make an appointment at: https://elizondo.youcanbook.me Send a WebMail

U6L5 – California Common Core State Standards

- HSG-GMD.A.3: Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
- HSG-MG.A.1: Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

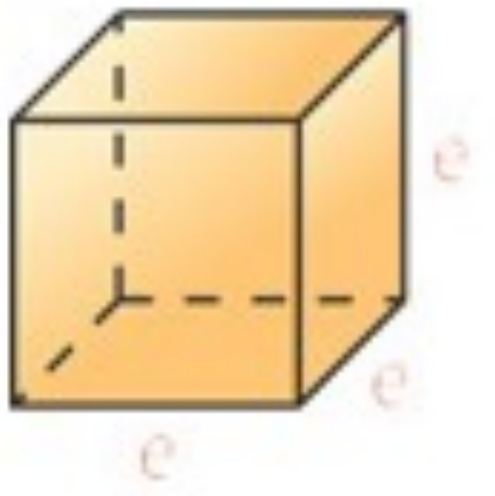
U6L5 – Objectives

- Find the volume of a pyramid and a cone

U6L5 – Introduction

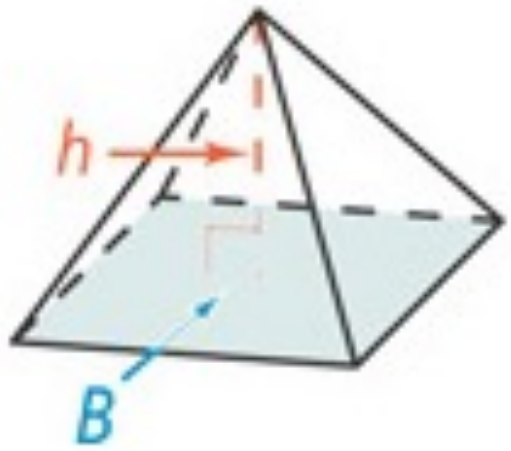
Volume is the space that a figure occupies. It's measured in cubic units such as cubic inches (in^3), cubic feet (ft^3), or cubic centimeters (cm^3)

The volume V of a cube is the cube length of its edge e, or $V = e^3$



U6L4 – Volume of a Pyramid

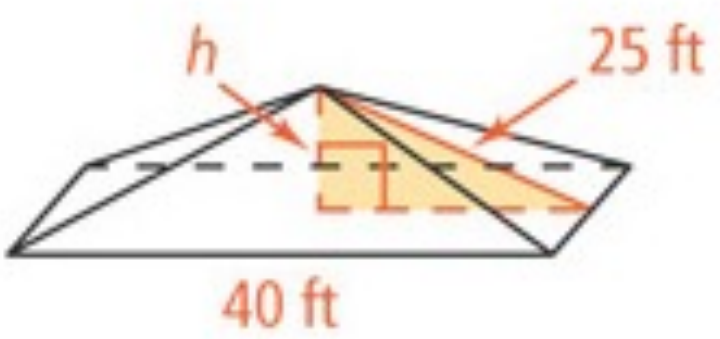
The volume of a pyramid is one-third the product of the area of the base and the height of the pyramid.

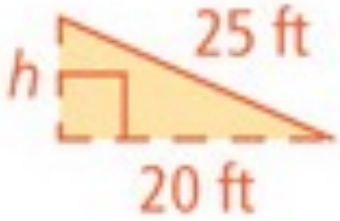


$$V = \frac{1}{3}Bh$$

U6L4 – Finding the Volume of a Pyramid

What is the volume in cubic feet of square pyramid with base edges 40 ft and a slant height of 25 ft.?





$$a^2 + b^2 = c^2$$

$$h^2 + 20^2 = 25^2$$

$$h^2 + 400 = 625$$

$$h^2 = 225$$

$$h = 15$$

$$V = \frac{1}{3}(Base)\ (height)$$

$$V = \frac{1}{3}(40 \cdot 40)\ (15)$$

$$V = 8000\ ft^3$$

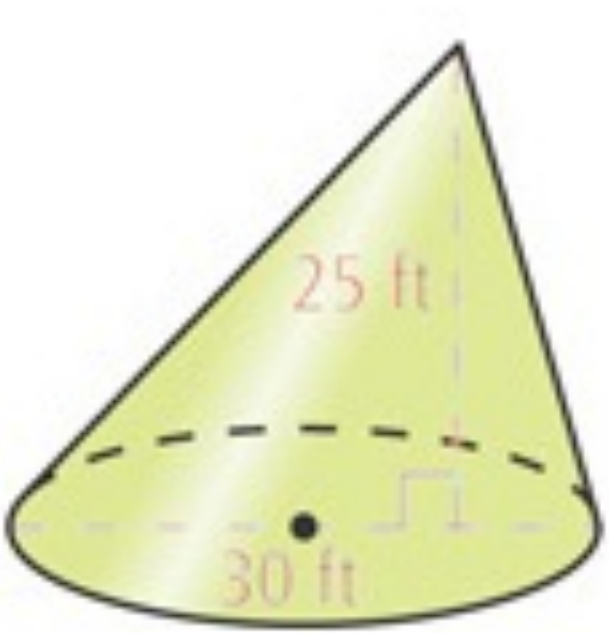
U6L4 – Volume of a Cone

The volume of a cone is one-third the product of the area of the base and the height of the cone.

$$V = \frac{1}{3}Bh, \text{ or } V = \frac{1}{3}\pi r^2 h$$

U6L4 – Finding the Volume of an Oblique Cone

What is the volume of the oblique cone below? Give your answer in terms of pi and also rounded to the nearest cubic foot.



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

$$V = \frac{1}{3}\pi(15)^2(25)$$

$$\boldsymbol{V = 1875\pi\ ft^3}$$

$$\boldsymbol{V = 5890\ ft^3}$$

U6L4 – Volume Formulas

Shape	Volume
Prism	$V = Bh$
Cylinder	$V = \pi r^2 h$
Pyramid	$V = \frac{1}{3}Bh$
Cone	$V = \frac{1}{3}\pi r^2 h$

Questions?

- Check the Message Board first
- Send a WebMail
- You can also make an appointment at https://elizondo.youcanbook.me
- You can also call me at (559) 549-3244. If I'm not available to answer your call, please leave a voicemail with your full name and phone number.