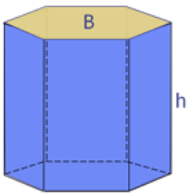
Math 7H - Unit 5

Day 17 - Volume of Prisms & Pyramids

Lesson Objectives:

- I can draw geometric shapes with given conditions.
- I can solve real-world and mathematical problems involving volume of three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

The **volume** of a three-dimensional figure is a measure of the amount of space that it occupies. Volume is measured in cubic units.



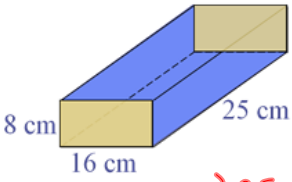
The volume V of a prism is the product of the area of the base and the height of the prism.

$$V = Bh$$

B is the Area of the Polygon Base

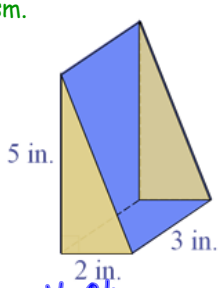
h is the height of the prism

Find the volume of each prism.



$V=(8\cdot16)25$

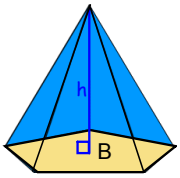
$V=3200cm^3$



$V=Bh$

$V=(\frac{1}{2}\cdot5\cdot2)\cdot3$

$V=15in^3$

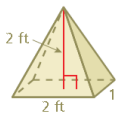


The volume V of a pyramid is one-third the product of the area of the base and the height of the pyramid.

$$V = (1/3)Bh$$

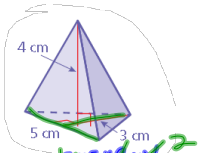
B is the Area of the Polygon Base
h is the height of the pyramid

Find the volume of each solid. If necessary, round to the nearest tenth.



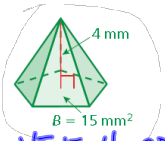
$\frac{2\cdot1\cdot2}{3}=1\frac{1}{3}ft^3$

$V=1.3ft^3$



$V=\frac{5\times5\times4}{3}\times2$

$V=10cm^3$



$V=\frac{15\cdot4}{3}=20mm^3$

Homework

7.1 pg 302 #4-24 (evens)

7.3 pg 314 #4-18

* Individual Think Time *

What to do if you get stuck...

1. Reread the problem. Did you write it down correctly?
2. Reread your notes. Is there a problem similar that we did together in class?
3. Find a problem similar in your book. Try this one to see if it helps.
4. Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...