Geometry/Trig

Name: _____

Date: _____

Lesson 2-5: Volume of Prisms and Cylinders

Learning Goals: **#10***:* How do I find the volume of a rectangular prism?

#11: How do I find the volume of a triangular prism?

#12: How do I find the volume of a cylinder?

Video on Edpuzzle! Click the link in Google Classroom and sign in with "Google" button!

FLIPPED CLASSROOM

Watch the assigned video fill in notes/answer questions as you go. Mastery of the content of this video is essential for you to understand in class. Content in this video is only covered in this assignment. I WILL NOT TEACH THIS CONTENT in a separate lesson during class. You can re-watch parts at any time and if you have questions.

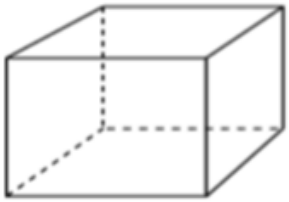
Warm Up

1) What is volume?

What <u>units</u> do we use for volume?

Volume of Prisms and Cylinders

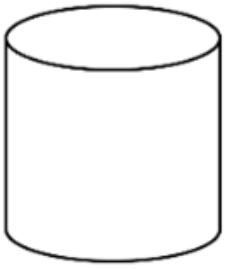
for any 3D figure: V =



Base Shape:

Area of base:

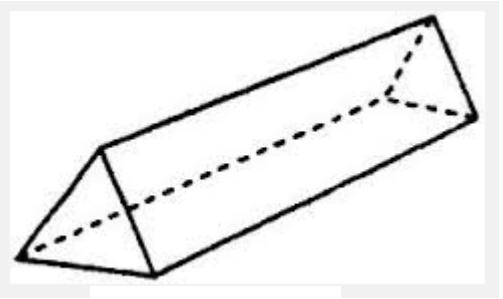
V =



Base Shape:

Area of base:

V =



Base Shape:

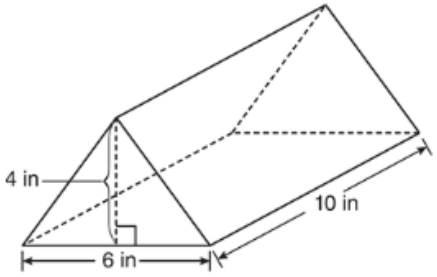
Area of base:

V =

Let's try it!

Watch Me!

Example 1: A packing carton in the shape of a triangular prism is shown in the diagram below.



Base Shape:

Area of base:

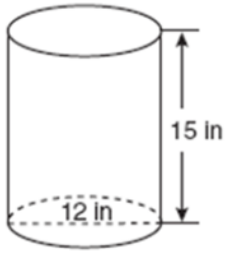
What is the **volume**, in cubic inches, of this carton?

Example 2: The volume of a cylinder is 12,566.4 cm^3. The height of the cylinder is 8 cm. Find the radius of the cylinder to the *nearest tenth of a centimeter*.

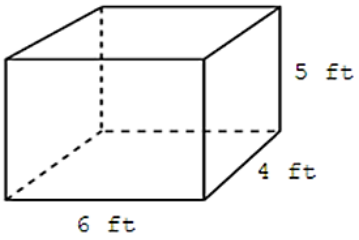
Geometry/Trig

Practice!

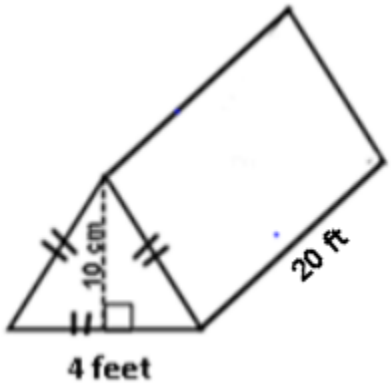
3. Find the *volume* of the three-dimensional figure. ***Round to the nearest hundredth.***



4. Find the *volume* of the following three-dimensional figure. Use appropriate units in your answers.



5. Calculate the volume of the following figure.



Geometry/Trig

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Lesson 2-5: Homework

Homework Scale	
Score	**Description (must complete all components to earn score)**
3	• Homework *Complete* • Use *different color* to check work • Mark correct answers with check mark ✓ • For incorrect answers, *circle specific mistakes* • Incorrect answers should have *thorough corrections*
2.5	• Corrections made but ***not*** in a different color
2	• Homework complete • Marked answers right/wrong, but no corrections made
1.5	• Completed but ***not*** checked
1	• Homework Incomplete
0	• Homework missing/no effort or attempt

1. The Parkside Packing Company needs a **rectangular** shipping box. The box must have a length of 11 inches and a width of 8 inches. Find, to the *nearest tenth of an inch*, the height of the box if the volume is $800 in^3$.

2. What is the volume, in cubic centimeters, of a cylinder that has a height of 15 cm and a diameter of 12 cm? **Leave your answer in terms of Pi.**

3. A fish tank with a **rectangular** base has a volume of 3,360 cubic inches. The length and height of the tank are 14 inches and 12 inches, respectively. Find the height, in inches, of the tank.

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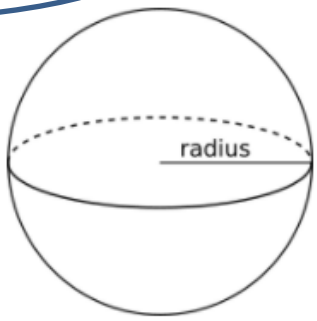
Volume of Spheres

The volume of a sphere can be found using the following formula:

V = _____ where r =



Watch Me!

Example 1: What is the volume, to the nearest hundredth of a cubic inch, o f 3 inches?

You Try!

Example 2: If a sphere has a volume of $972\pi\ in^3$ what is the radius of the sphere?