

## The Density Webquest

Name: \_\_\_\_\_

Period: \_\_\_\_\_

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### Key Concepts:

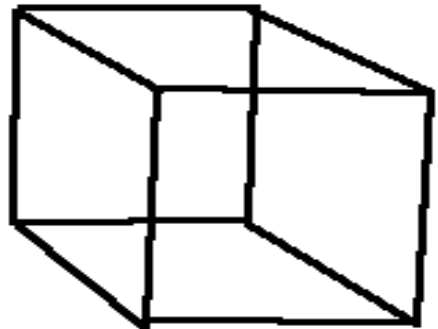
- To understand the properties of density
  - To calculate volume, mass and density
  - To understand what percent deviation is
  - To calculate percent deviation
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### Part A: Volume

1. What is the definition of [volume](#)?
  - a) What do you think is the key word in that definition (one word)?
2. What happens to the [volume](#) of an object if it is heated?

#### Finding the Volume of a regular shaped object

3. What is the [formula](#) for volume (scroll to bottom of site)?
  - a) What is the volume of this object (show your work)?  
Measure it with a ruler in [centimeters](#). 
  - b) How should the units be?



#### Finding the Volume of an irregular shaped object

- An object that can not be measured by a ruler
6. Briefly describe the steps to calculate volume of an irregular shaped object ([the water displacement method](#)):

7. Practice:

- a. What is the volume of the water in this [picture](#)?
- b. What is the volume of water after the object is placed in it in this [picture](#)?
- c. What is the volume of the object (volume before object - volume after object was placed in)

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## Part B: Mass

8. What is the definition of [mass](#)?

- a) What do you think the key word is in the definition?

9. How do you [calculate the mass](#) of an object? Pay close attention to the units that are used, too.

- a) [Practice](#) calculating mass (scroll about half way down)?

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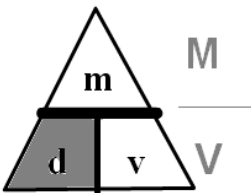
## Part C: Density

10. What is the definition of [density](#)?

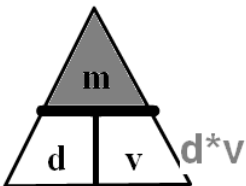
11. What is the [formula](#) for density (write all of them)? Remember the triangle method! It helps!

12. Practice Problems (show work):

- a) What is the density of a 75 g block of wood measuring 12 cm x 8 cm x 9 cm?
  1. What's the mass:
  2. What's the volume:
  3. What's the density (calculate it)

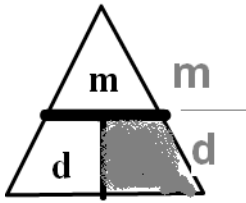


- b) What is the mass of a 49 cm<sup>3</sup> object with a density of 63 g/cm<sup>3</sup>?
  1. What's the volume?



2. What's the density?

3. What's the mass (calculate it)?



c) What is the volume of a 17 kg solid with a density of  $0.05 \text{ kg/cm}^3$ ?

1. What's the mass?

2. What's the density?

3. What's the volume (calculate it)?

- [Here are the answers! And explanations.](#)