

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

## Density Study Guide

1. Write Equation
2. Plug in Numbers
3. Solve Equation
4. Circle Answer
5. Write Units

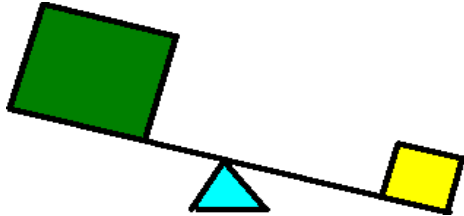
$$\text{Density} = \text{Mass/Volume}$$
$$\text{Volume} = \text{Mass/Density}$$
$$\text{Mass} = \text{Density} \times \text{Volume}$$

- 1) A sample has a **mass** of 64 grams and a **volume** of 512 cm<sup>3</sup>. What is its **density**? (5pts)
  
  
  
  
  
  
  
  
  
  
- 2) A certain metal has a **density** of 7.6g/cm<sup>3</sup>. If a sample of this metal has a **mass** of 304g, what is its **volume**? (5pts)
  
  
  
  
  
  
  
  
  
  
- 3) A certain metal has a **density** of 7.6g/cm<sup>3</sup>. If a sample of this metal has a **volume** of 42 cm<sup>3</sup>, what is its **mass**? (5pts)
  
  
  
  
  
  
  
  
  
  
- 4) Salt Water has a **density** of 1.03g/cm<sup>3</sup>. What is the **mass** (in kilograms) of 1 cubic meter of salt water (1m<sup>3</sup>)? Hint: Calculate how many cubic centimeters of are in one cubic meter, and use that for the **volume**. (5pts)
  
  
  
  
  
  
  
  
  
  
- 5) 744 cm<sup>3</sup> of some substance has a **mass** of 1 gram. What is the **density** of this material? What might this material be? (5pts)

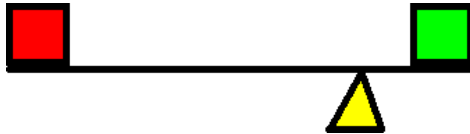
6. Who was the scientist credited for discovering density?

7. What phrase did he yell when he found the answer?

8. Which cube is less dense?



9. Which cube is more dense?



10. Why does a Cartesian Diver sink when the bottle is squeezed?

11. Why does the diver float when the bottle is released?

12. Find the density of 3 of the cubes from the set.

Cube A

Cube B

Cube C