

Name _____ Date _____

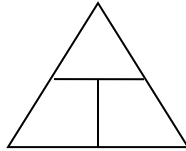
Density Problems

1. Write the equation for Density: _____

Unit for Solids _____

Unit for Liquids _____

2. Place the symbols, from the density equation, in their proper place in the triangle:



3. Write the equation for Volume: _____

Unit for Solids _____

Unit for Liquids _____

4. Write the equation for Mass: _____ Unit _____

Example:

1. Iron has a density of 7.86 g/cm^3 . What would the mass of an iron bar with a volume of 40 cm^3 ?

Density 7.86 g/cm^3 **Volume** 40 cm^3 **Mass** ???

Formula **With Knowns** **Answer with unit**

$$M = DV = (7.96)(40) = 0.199 \text{ g}$$

(Show all work and include all units – Just like in the example problem)

1. A solid ball has a mass of 50 grams and a volume of 20 cm^3 . What is the density?

Density _____ **Volume** _____ **Mass** _____

Formula **With Knowns** **Answer with unit**

2. Silver has a density of 10.5 grams/cm^3 . What would be the volume of a silver coin if it had a mass of 5g?

Density _____ **Volume** _____ **Mass** _____

Formula **With Knowns** **Answer with unit**

3. Given that the density of gold is 19.3 g/cm^3 , what would be the mass of a gold bar that had a volume of 100 cm^3 ?

Density _____ **Volume** _____ **Mass** _____

Formula **With Knowns** **Answer with unit**

4. A rock has a volume of 30cm^3 and a mass of 60g. What is its density?

Density _____ Volume _____ Mass _____

Formula With Knowns Answer with unit

5. Bronze has a density of 9.87 g/cm^3 . What would be the volume of a bronze coin if it had a mass of 5g?

Density _____ Volume _____ Mass _____

Formula With Knowns Answer with unit

6. Freshwater has a density of 1.0 g/cm^3 . What volume container would be needed to hold 50g of this water?

Density _____ Volume _____ Mass _____

Formula With Knowns Answer with unit

7. Aluminum has a density of 2.7 g/cm^3 . What would be the mass of a bar of aluminum that had a volume of 100cm^3 ?

Density _____ Volume _____ Mass _____

Formula With Knowns Answer with unit

8. A block of metal has a volume of 15cm^3 and a mass of 45 g. What is its density?

Density _____ Volume _____ Mass _____

Formula With Knowns Answer with unit

9. The water in the Great Salt Lake in Utah can reach a density of 1.25 g/cm^3 . What volume container would be needed to hold 50g of this water?

Density _____ Volume _____ Mass _____

Formula With Knowns Answer with unit

10. What is the density of Carbon dioxide gas if 0.196 g occupies a volume of 100 ml?

Density _____ Volume _____ Mass _____

Formula With Knowns Answer with unit