

## DENSITY PROBLEMS

Name \_\_\_\_\_

(Show your work!!)

Date \_\_\_\_\_

*Densities of some common substances*

Substances	Density (g/cm)
Air	0.0013
Gasoline	0.7
Wood (oak)	0.85
Water (ice)	0.92
Water (liquid)	1
Aluminum	2.7
Steel	7.8
Silver	10.5
Lead	11.3
Gold	19.3

1. Mass = 10.3 g                      Volume = 14.7 cm<sup>3</sup>                      Density = \_\_\_\_\_

\_\_\_\_\_

2. Mass = 50 g                      Volume = 4.42 cm<sup>3</sup>                      Density = \_\_\_\_\_

\_\_\_\_\_

3. Mass = 15 g                      Volume = 15 cm<sup>3</sup>                      Density = \_\_\_\_\_

\_\_\_\_\_

4. Mass = 15 g                      Volume = 16.3 cm<sup>3</sup>                      Density = \_\_\_\_\_

\_\_\_\_\_

5. Mass = 5 g                      Volume = 0.26 cm<sup>3</sup>                      Density = \_\_\_\_\_

\_\_\_\_\_

6. Mass = 2 g                      Volume = 0.26 cm<sup>3</sup>                      Density = \_\_\_\_\_

\_\_\_\_\_

7. What did questions 3 and 4 have in common? How did they differ? Which question has more mass per volume? Which answer has a greater density?

**DENSITY PROBLEMS (continued)**

8. Mass = 252 grams, length = 6 cm, width = 4 cm, height = 1 cm

Volume = \_\_\_\_\_

Density = \_\_\_\_\_

Substance = \_\_\_\_\_

9. Mass = 255 g, length = 5 cm, width = 3 cm, height = 2 cm

Volume = \_\_\_\_\_

Density = \_\_\_\_\_

10. Mass = 3.375 kg, length = 25 cm, width = 10 cm, height = 5 cm

Volume = \_\_\_\_\_

Density = \_\_\_\_\_

Substance = \_\_\_\_\_

11. A sheet of aluminum has a volume of  $54 \text{ cm}^3$ . What is its mass?

12. A block of oak wood has a volume of  $100 \text{ cm}^3$ . What is its mass?

13. A steel plate measures 20 cm long, 8 cm wide, and 2 cm high. What is the mass of this plate?

14. A lead ball has a mass of 70 grams. What is its volume?

15. A container of water has a mass of 98.4 grams. What is its volume?

16. An ice cube measures 5 cm long, 2 cm wide, and 2 cm high. What is the mass of the ice cube?