

Density Problems

Name: _____

Solve the following problems for mass, volume, or density. Make sure to include a unit with your answer.

1. If iron has a density of 7.6 g/ml, and you have a piece with a mass of 33 g, what is the volume of the piece of iron?
2. If a gold coin has a mass of 115 g and a volume of 5.3 ml, then what is the density of gold?
3. Air has a density of 0.0013 g/ml, so what would be the mass of air that could be held in an empty swimming pool that has a volume of 70,000,000 ml?
4. If you knew that the density of silver was 10.5 g/ml, could you determine if a piece of jewelry was made from silver? How would you do it?
5. If the piece of jewelry in question number 4 above had a mass of 55g and a volume of 7.9 ml, would you say that it was silver?
6. If you had an object with a mass of 76g and a volume of 22 ml, what is its density? If you cut this object in half, what would be its density?
7. Water has a density of 1.0 g/ml, so if you have 225ml of water, how many grams of water is this?

8. If water has a density of 1.0 g/ml, and another type of matter has a density of 0.83 g/ml, what will happen to that matter if you place it in water?

9. If a piece of copper has a mass of 125g and a density of 8.9 g/ml, what would be the volume of the piece of copper?

10. If a car wheel contains has 15,000 g of aluminum in and the density of aluminum is 2.7 g/ml, what would be the volume of the wheel?

11. Will a piece of steel float in mercury? The density of steel is 7.6 g/ml and the density of mercury is 13.5 g/ml.

12. How many grams of silver would you need to make a fork that has a volume of 35 ml? The density of silver is 10.5 g/ml.

13. If a bathroom faucet is made out of brass and it has a mass of 1450g, what would be the volume of brass in the faucet? Brass has a density of 8.0 g/ml.

14. Why do you think wood with a density of 0.75 g/ml is called hard wood, but wood with a density of 0.45 g/ml is called a soft wood?

Give an example of a hard wood?

Give an example of a soft wood?

15. Why does a hot air balloon float in air? Use the word density in your explanation.