DATE: NAME: CLASS:

CHAPTER 7

Calculating Density Practice Problems

BLM 3-10

Goal • Use these questions to check your understanding of how to calculate density.

What to Do

Answer these questions after you have read page 265 of *BC Science 8*.

1. A student measures the mass of an 8 cm^3 block of brown sugar to be 12.9 g. What is the density of the brown sugar?

2. A chef fills a 50 mL container with 43.5 g of cooking oil. What is the density of the oil?

3. A machine shop worker records the mass of an aluminum cube as 176 g. If one side of the cube measures 4 cm, what is the density of the aluminum?

4. Based on the density values on page 262 of *BC Science 8*, list how the following liquids would layer in a beaker from top to bottom: glycerol, ethyl alcohol, mercury, seawater, machine oil, water.

5. A teacher performing a demonstration finds that a piece of cork displaces 23.5 mL of water. The piece of cork has a mass of 5.7 g. What is the density of the cork?

6. A carver begins work on a block of granite that measures 20 cm by 10 cm by 5 cm. If the block of granite has a mass of 2700 g, what is the density of the granite?

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7. A piece of PVC plumbing pipe displaces 60 mL when placed into a container of water. If the pipe has a mass of 78 g, what is the density of PVC?

8. A solid magnesium flare has a mass of 1300 g and a volume of 743 cm^3. What is the density of the magnesium?

9. An ice cube has a volume of 12 cm^3, and a mass of 11 g. What is the density of the ice?

10. Gold is one of the densest substances on Earth. A gold bar 20 cm by 5 cm by 5 cm has a mass of 9.7 kg. What is the density of gold? Express your answer in g/cm^3.