Sci 8 **Density Worksheet**  Name:

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

 1. A student measures the mass of an 8 cm3 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. Calculate the mass of a liquid with a density of 2.5 g/ml and a volume of 15ml.

4. Calculate the volume of a liquid with a density of 5.45g/ml and a mass of 65g.

5. 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?

 6. 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.

 7. A teacher performing a demonstration tells the class a piece of cork has a density of 0.024 g/ml and a mass of 5.7g. How much water will it displace if push all the way into water?

 8. A carver begins work on a block of granite below. If the block of granite has a mass of 2700 g, what is the density of the granite?



 9. A piece of PVC plumbing pipe displaces 60 mL when placed into a container of water and has a density of 1.3 g/ml. What is the pipe’s mass?

 10. A solid magnesium flare has a mass of 1300 g and a volume of 743 cm3. What is the density of the magnesium?

 11. An ice cube has a volume of 12 cm3, and a mass of 11 g. What is the density of the ice?

12. 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/cm3.

13. A graduated cylinder has a mass of 50 g when empty. When 30 ml of water is added, the graduated cylinder has a mass of 120g. If a rock is added to the graduated cylinder, the water level rises to 75 ml and the total mass is now250g. What is the density of the rock?

14. A student performs an experiment with three unknown fluids and obtains the following measurements:

Fluid A: Mass = 2060 g, Volume = 2000ml

Fluid B: Mass = 672g , Volume = 850 ml

Fluid C: Mass = 990g, Volume = 1100ml

Draw how the fluids would be layered if they

were combined in a beaker.

15. Use your density skills to find the identity of the following mystery objects:

