Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Density Worksheet 3**

1. The density of copper is 8.9 g/cm3. What is the mass of 5.67 cm3 of copper?

M= Dxv 8.9 x 5.67= 50.46g

2. We know that 250 cm3 of water at 4°C has a mass of 64.3g. What is the density of water?

D = m/v 64.3/250= 0.26 g/cm3

3. Sulphur has a density of 2.0g/cm3. A block of Sulphur has a mass of 64.3g. What is the volume of the block?

V = m/D 64.3/2= 32.15 cm3

4. A pebble in a graduated cylinder of water raised the water level from 10.1mL to 25.2mL. The mass of the pebble could not be determined; however the density of the pebble is 2.0 g/cm3. What is the mass of the pebble?

Volume= 25.2-10.1 = 15.1mL

M = Dxv = 15.1 x 2= 30.2 g

5. A piece of silver has a volume of 10.0cm3, and a mass of 105.0g. What is the density of silver?

D = m/v 105/10= 10.5g/cm3

6. The density of magnesium is 1.75 g/mL. A chunk of magnesium has a volume of 10.1cm3. What is the mass?

M = Dxv 1.75 x 10.1 = 17.675 g

7. A block of wood has a mass of 250g and a density of 0.5g/cm3. What is the volume?

V = m/D 250/0.5= 500 cm3

8. A block of wood has the following measurements: length = 15mm, width = 2.0cm, height = 45mm. If the mass of the block is 47.25g, what is the density?

Volume = 0.15cmx2cmx0.45cm = 0.135cm3

D= m/v 47.25/0.135= 350 g/cm3

9. The density of a bolt is 6.0 g/cm3. The level of a graduated cylinder with the bolt was at 25mL. When the bolt was removed, it was 15.5 mL. What is the mass of the bolt?

Volume= 25-15.5 = 9.5mL

M = D xv 6 x 9.5= 57g

10. What is the volume of a piece of plastic whose density is 4.0 g/cm3, and whose mass is 48.0g?

v= m/D 48/4= 12 cm3