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## Problem Solving Worksheet **WITH ANSWERS**

*From the word problems below re-write all of the numbers with their units, identify what they are, and restate the question they are asking in a short way. The first question is answered for you to give you an idea of what I am looking for. YOU DO NOT NEED TO SOLVE THE PROBLEMS YET.*

1) If the mass of cube is 200 grams and it takes up a volume of 325 L, what is the density?

Mass = 200g  
Volume = 325 L  
Density = ?

2) A balloon is 340mL and has a mass of 10 grams. How dense is the balloon?

Volume = 340mL  
Mass = 10g  
Density = ?

3) How much energy does it take to move a 50 kilograms object 3 meters?

Mass = 50 kg  
Distance = 3m  
Energy = ?

4) If an object is 30 centimeters long by 25 centimeters wide by 10 centimeters deep, what is the volume?

Length = 30cm  
Width = 25cm  
Depth = 10cm                      Volume = ?

5) A 553 millimeter pipe is cut to be 350 millimeters long. How much was cut off?

Distance 1 = 553mm  
Distance 2 = 350mm  
Difference = ?

6) If the density of an object is 3.5 milligrams / centiliters and the mass is 27 grams, what is the volume of the object?

Density = 3.5mg/cL

Mass = 27g  
Volume = ?

7) Even if the sentence doesn't make sense and you get a question like (4 grams / L) what is the hyperbole of the vector addition? What matters most is you pick out the numbers and units ( 7 L ).

Density = 4g/L  
Volume = 7L

8) Most of the difficulty of 30 meters solving a problem is understanding what information you start with. You can even highlight or box numbers and units like 45 kilograms if it helps you better visualize the information. You will use this skill through out the rest of science.

Distance = 30m  
Mass = 45kg

*In the second part of the worksheet solve the density problems. Remember the formula is Density = mass / volume. Be sure to give units in your answer.*

9) What is the density of an object with a mass of 34g and a volume of 2 L?

Density = 17g/L

10) What is the mass of an object that has a volume of 18mL and a density of 56g/mL?

Mass = 1008g

11) What is the volume of an object that has a mass of 83g and a density of 54g/mL?

Volume = 1.54mL

12) An cube is 90kg and 72L. What is the density?

Density = 1.25kg/L

13) Solve for the mass if you know a ball is 16 mL and 2.4 mg/mL.

Mass = 38.4mg

14) Given 89kg and 35kg/L what is the volume?

Volume = 2.54L