

Physical Science Quiz 1 Study Guide

Name: _____

Date: _____

Period: _____

Quiz date: Friday, October 14, 2015

Points: 36 points

Bring your notebook home to study!

Formulas to know:

Volume (length x width x height)

Density (mass ÷ volume)

Volume of Graduated Cylinder after object - volume in Graduated Cylinder before object

1. Chelsea is trying to find the volume of the two cubes her mother put in front of her. She knows they are different materials, but can see they are the same size. Each cube's side is 6 cm. What is the volume of the cubes?

$$6 \times 6 \times 6 = 216$$

Volume: 216 cm³

2. Using the volume from #1, find the density of the cubes. Remember, Chelsea knows they are different materials. The mass of cube one is 45.6 grams. The mass of cube 2 is 84.5 grams.

$$\frac{45.6 \text{ g}}{216 \text{ cm}^3} =$$

$$\frac{84.5 \text{ g}}{216 \text{ cm}^3}$$

Density of cube 1: 0.21 g/cm³

Density of cube 2: 0.39 g/cm³

3. Gage finds the mass of his apple, using the balance, to be 24.6 grams. Since it is an odd shape, he decides to use a graduated cylinder to find the volume. The volume of the cylinder before the apple is put in reads 30 mL. After the apple is put in the cylinder, it reads 113 mL. What is the volume of the apple?

$$113 - 30 = 83$$

Volume of the apple: 83 cm³

Define these vocabulary words: (hint: Use your notebook)

Matter: anything that takes up space & has mass.

Mass: measures the amount of matter.

Weight: measure of ^{the} force of gravity.

~~Mass~~ Energy: the ability to do work.

Density: how heavy an object is for it's size.

Volume: measure of how much space it takes up.

True or false. Circle one.

1. Weight is measured with a balance TRUE FALSE
2. Mass never changes no matter where you are TRUE FALSE
3. Mass and weight are the same thing TRUE FALSE
4. Weight changes due to the force of the gravity present TRUE FALSE
5. A shove is an example of matter TRUE FALSE
6. Cups and mugs are examples of matter TRUE FALSE
7. g/cm^3 is the unit for density TRUE FALSE
8. cm is the unit for volume TRUE FALSE

$$\text{volume} = \text{cm}^3$$

Graded on completion. We will go over the correct answers Friday before the quiz.