

Geometry 4/17/17

Today - Density

Tuesday & Wednesday - Review

Thursday & Friday - Summative
Assessment.

Density

Date: _____ Per.: _____

Volume: *The amount of space that a substance or object occupies, or that is enclosed within a container.*

Mass: *The amount of matter that an object contains.*

Density: *Measure of mass per volume.*

How to Calculate Density:

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}} \rightarrow D = \frac{M}{V}$$

Example 1: What is the density of CO gas if 19.6 grams occupies a volume of 100 milliliters?

$$D = \frac{m}{V} = \frac{19.6g}{100ml} = 0.196g/ml$$

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3. A certain gas expands to fill a 3 liter cylinder. Its mass is measured to be 0.6 kilogram. What is the density?

4. A solid is 5cm tall, 3cm wide and 2 cm thick. It has a mass of 129 grams. What is its density?

5. A graduated cylinder is filled to an initial volume of 12.7 milliliter. A rock is dropped into the graduated cylinder. The final volume of the graduated cylinder is 18.2 milliliter. What is the rock's volume in milliliters?

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6. Samples of three unknown liquids have been obtained. Calculate the density of each.
- Sample A has a mass of 24 grams and a volume of 6 milliliters.

- Sample B has a mass of 12 grams and a volume of 6 milliliters.

- Sample C has a mass of 12 grams and a volume of 3 milliliters.

Day 2 Assignment Solve the following problems. Answers should be expressed to the nearest hundredth (3 decimals).

- A block of butter weighs 200 grams. The dimensions of the block are 8 cm x 6cm x 5cm. What is the density of the block of butter?

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2. A shipping container weighs 100 kilograms. The dimensions are five meters by five meters by 8 meters. What is the density of the shipping container?

3. A sculpture is made of bronze and has a density of 8.5 grams per cubic centimeter. If has dimensions of 2 cm x 2 cm x 147 cm. Find the mass of the bronze sculpture.

4. A box has dimensions of 0.1 meters x 4 meters x 5 meters and has a mass of 25 kilograms. Find the density.

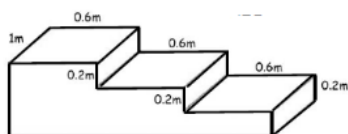
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5. Olympic medals have diameter of 6 cm and thickness of 1 cm. Gold has a density of 19 grams per cubic centimeters. Find the mass of the Olympic medal.

6. The density of concrete is 2400 kilogram per meter. How much will the step weigh?



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