Density calculations Name: \_\_\_\_\_\_\_\_\_\_\_\_\_

Score: \_\_\_\_/ 50

**SET ONE**

 Solve the problems below with the density formula. Use the Guess problem solving method on all problems.

$d=\frac{m}{V}$ where *m* is measured in grams and *V* is measured in cm3 or mL.

1. Find the density of a box with a mass of 27 grams and a volume of 3 milliliters.



2. Find the density of a crate with a mass of 50 grams and a volume of 2 milliliters

3. Find the density of a ball with a mass of 8 grams and a volume of 4 milliliters

4. Find the density of a package with a mass of 5 grams and a volume of 10 milliliters

5. Find the density of a rock with a mass of 150 grams and a volume of 3 milliliters

Check your work on this section at: <https://quizlet.com/149800467/flashcards>

**SET TWO**

Solve the problems below with the formula for a **rectangular prism**. Use the Guess problem solving method on all problems.

$V=l w d $ where *l, w* and *d* are measured cm.

1. Find the volume of a rectangle that is 3 cm tall, 4 cm wide and 2 cm deep. 
2. What is the volume of a 56 cubic centimeter object in milliliters (mL)? 
3. What is the volume of a cube with edges 5 cm in length? 
4. Find the volume of a box that is 1 cm tall, 5 cm deep and 6 cm wide. 
5. What is the volume of a cube with edges 2 cm in length? 

Check your work on this section at: <https://quizlet.com/149803253/flashcards>

**SET THREE**

Solve the problems below with the density formula. Use the Guess problem solving method on all problems.

$d=\frac{m}{V}$ where *m* is measured in grams and *V* is measured in cm3 or mL.

$V=l w d $ where *l, w* and *d* are measured cm.

1. Find the density of 36 gram box rectangle that has dimensions of 2 cm by 3 cm by 2 cm. 
2. Find the density of a cube that has a mass of 32 grams if the edges are 2 cm long. 
3. Find the density of a cube that has a mass of 250 grams if the edges are 5 cm long. 

Check your work on this section at: <https://quizlet.com/149806977/flashcards>

**SET FOUR**

Solve the problems below with the density formula solved for mass. Use the Guess problem solving method on all problems.

$m=d V$ where *d*  is measured in grams/mL and *V* is measured in cm3 or mL.

1. Find the mass of a rock if its density is 5 grams/ mL and its volume is 11 mL. 
2. You have a sample of a substance that has a density of 180 grams/mL. What is the mass of the sample if its volume is 2 mL? 
3. A block of plastic has a volume of 9 mL. Find its mass if the density of the plastic is 3 grams/mL. 

Check your work on this section at: <https://quizlet.com/149816238/flashcards>

**SET FIVE**

Solve the problems below with the density formula that is solved for mass. Use the Guess problem solving method on all problems.

$V=\frac{m}{d}$ where *m* is measured in grams and *d* is measured in g/cm3 org/ mL.

1. Find the volume of a sample if it has a density of 90 grams/mL. The sample's mass is 45 grams. 

2. You measure the mass of a rock as 160 grams. If this type of rock has a density of 10 grams/mL, find the volume of the rock. 

3. You know that oil has a density of 0.9 grams/mL. If you have a container with 90 grams of oil, what is the volume of the oil? 

**SET SIX**

For these problems, you will need to select the appropriate equation. Solve the problems below with the density formula. Use the Guess problem solving method on all problems.

$d=\frac{m}{V}$ $V=\frac{m}{d} $ $m=d V$

where *m* is measured in grams, *V* is measured in cm3 or mL and d is measured in g/cm3 or g/mL

1. You have a 30 mL rock with a mass of 60 grams. What is its density? 
2. A 800 gram sample has a density of 200 grams/mL. What volume is the sample? 
3. A cube with 3 cm edges has a density of 2 grams/mL. What is the mass of the cube? 
4. A sphere with a density of 7 grams/mL has a mass of 56 grams. What is the volume of the sphere? 

Check your work on this section at: <https://quizlet.com/149827243/flashcards>