$\qquad$

## Trimester 1 Metric System Test Review

## Length

Define Length:
What is the base unit for measuring length?
What measurement tool is used for finding length?
What is the length of this line in centimeters?

## Volume

Define Volume:
What is the base unit for measuring volume?
Write the formula for finding the volume of a cube.
What is a meniscus?
Read the meniscus in the picture: What does it read?


Mass
Define Mass:

What is the base unit for measuring mass?
Read the Scale:


## Temperature

Define temperature:

$\qquad$

## Density

Define density: (Use your notes)
What are the labels used for measuring density?
Write the formula for finding density?
If object $A$ and object $B$ have the same volume but object $A$ has a larger mass, which of them has a greater density?

If object A and object B have the same mass but object A has a larger volume, which of them has a greater density?

Describe why some objects float in water and others sink. Use the density of water to make your comparison.

## Conversions

Write out the metric prefix conversion line in the space below and use it to make the following conversions.


1. $100 \mathrm{~g}=$ $\qquad$ mg
2. $0.826 \mathrm{~kL}=$ $\qquad$ cL
3. $239 \mathrm{~cm}=$ $\qquad$ m
4. $32 \mathrm{hm}=$ $\qquad$ km

## Calculate the Density (Show the calculation/work!!!)

a. Mass $=29 \mathrm{~g} \quad$ Volume $=10 \mathrm{~cm}$
Density $=$
Float or Sink?
(Circle One)
b. Volume $=35 \mathrm{~mL} \quad$ Mass $=10 \mathrm{~g}$
Density $=$
Float or Sink?
(Circle One)
c. Mass $=172 \mathrm{~g} \quad$ Volume $=50 \mathrm{~cm}^{3}$
Density $=$
Float or Sink?
(Circle One)

1. Find the volume of the solid and calculate the density. Show your work below. (Round to the nearest centimeter)

$\qquad$
2. If two objects have an identical volume, what measurement will determine whether they sink or float?
3. If two objects have identical masses, what measurement must be found in order to determine density?
4. A rectangular solid of unknown density is 5 meters long, 2 meters high and 4 meters wide. The mass of this solid is 300 grams. Given this information for this homogeneous (alike throughout) material, calculate its density.

5. A rock occupies a volume of $20 \mathrm{~cm}^{3}$ and has a mass of 54 grams. Find the density of this rock.
6. A graduated cylinder has $20 \mathrm{ml}\left(\mathrm{cm}^{3}\right)$ of water placed in it. An irregularly shaped rock is then dropped in the graduated cylinder and the volume of the rock and water in the cylinder now reads $30 \mathrm{ml}\left(\mathrm{cm}^{3}\right)$. The mass of the rock dropped into the graduated cylinder is 23 grams.
a. Find the volume of the rock dropped into the graduated cylinder.

b. Find the density of the rock dropped into the graduated cylinder.
