



Metric Study Guide



Name: _____ Date: _____ Units: _____

LENGTH

1.) What is the key unit for length? _____

2.) Circle the best unit for measuring each distance:

a.) Thickness of an eyelash: mm cm m

b.) Length of an unsharpened pencil: cm m km

c.) Distance from Chicago, IL to Orlando, FL: mm cm km

3.) Convert the following measurements:

a.) 34 mm = _____ cm

b.) 3 km = _____ m

c.) 234 cm = _____ m

d.) 35 m = _____ mm

4.) Please use a ruler and find the length of the lines below. Please round them to the nearest .1 of a cm and tell me how many mm they are as well.

a. cm = _____ mm = _____



b. cm = _____ mm = _____



c. cm = _____ mm = _____



MASS

5.) What is the key unit for mass? _____

6.) Circle the best unit for measuring each mass:

a.) Amount of spices in a batch of cookies: mg g kg

b.) Your mass: mg g kg

c.) Mass of 10 pennies: mg g kg

7.) Convert the following measurements:

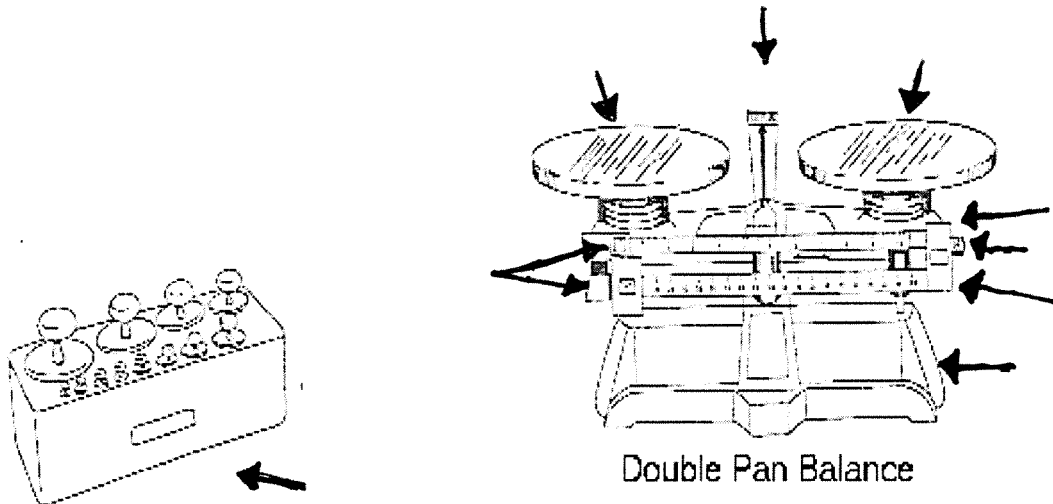
a.) 16 mg = _____ g

b.) 4.7 kg = _____ g

c.) 12345 g = _____ kg

d.) 2 g = _____ mg

8.) Make sure you know how to label all of the parts of a double pan balance:



Double Pan Balance

VOLUME

9.) What is the key unit for volume? _____

10.) Circle the best unit for measuring each volume:

a.) The amount of soda in one can: mL L

b.) Water in a bathtub: mL L

11.) Convert the following measurements:

a.) 160 mL = _____ L

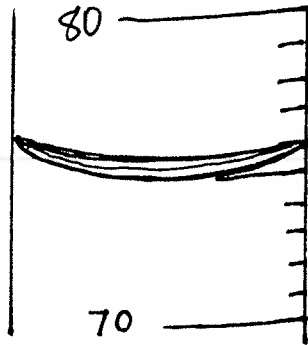
b.) 23 kL = _____ L

b.) 456 cL = _____ mL

d.) 120 daL = _____ dL

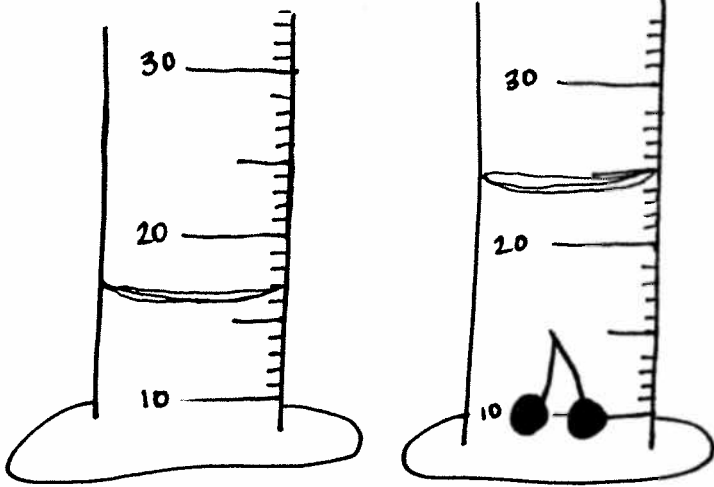
12.) When finding the volume of irregular shaped solid objects, in a graduated cylinder, you should use the _____

13.) It is very important to make sure you read to the bottom of the _____ when measuring from a graduated cylinder. **(Make sure you can read the volume of a graduated cylinder correctly and label with the appropriate units)**

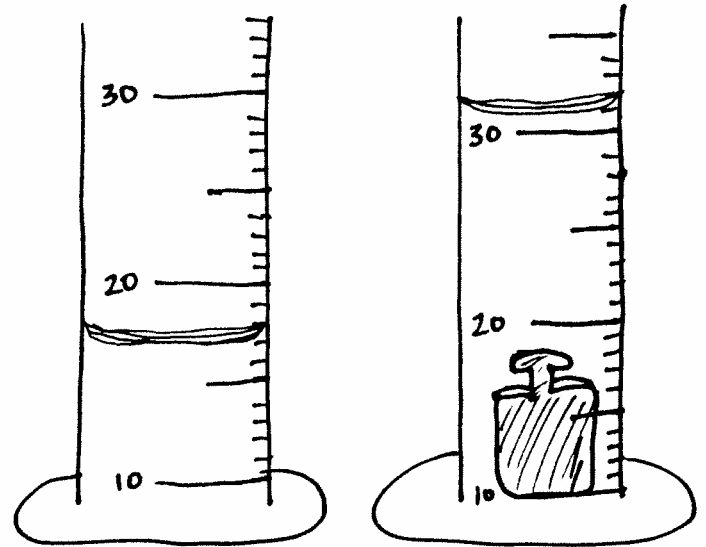


What is the measurement shown here? _____

14.) How much water is displaced?



Volume of object: _____



Volume of object: _____

DENSITY

15.) What is the formula for density? Remember to **LABEL** everything and show your work!

16.) What is the density of a 50 cubic centimeter rectangular object that has a mass of 50.3 grams? Will this object float?

17.) A rectangular object measures 5 cm x 6 cm x 1 cm. The object has a mass of 14 grams. What is the density? Will this object float?

18.) Would the objects with the following densities float, sink, or remain suspended in water?

a.) 0.85 g/mL _____

b.) 1.0 g/mL _____

c.) 1.4 g/cm³ _____

d.) 0.92 g/cm³ _____

19.) Compare the following problems by using the less than (<), greater than (>) or equal to (=) signs.

a.) 56 cm _____ 6 m

b.) 7 g _____ 698 mg

c.) 43 mg _____ 5 g

d.) 1000 mL _____ 1 L

20.) Make sure you can fill in a stair step with all the metric prefixes in order from largest to smallest – you will be able to use this when doing the conversion problems on the test.

King – **H**ecto – **D**ied – **U**nexpectedly – **D**rinking – **C**hocolate – **M**ilk

Kilo-	Hecto-	Deka- or Deca-	Key Unit	Deci-	Centi-	Milli-
--------------	---------------	---------------------------	-----------------	--------------	---------------	---------------

21.) Please know the definitions of the following terms.

a. Mass –

b. Weight –

c. What is the major difference between mass and weight?

22.) What is the definition of **volume**?

23.) What is the definition of **length**?

24.) There will be a performance station where you will have to **find the mass of an object using the double pan balance**. Please review your mass lab to remember how to do this correctly.

25.) Please review the “Which unit/tool do you choose?” worksheet we did in class and make sure you know when which tool is most appropriate to use based on what is being measured.



SOME STUDY TIPS: Write down any questions you may have so you can remember to ask me tomorrow. Please review old worksheets and labs! You can make 2 piles – things to study from and things you can recycle. Review the metric self-checks we did throughout this unit...they will be very helpful in preparing for this test. You can also go on my website and take the pre-test again (as a practice test) for the unit. The answer key for the pre-test is available on my website.

Questions to ask my teacher...

1.

2.

3.