Chemistry Students

NAME_____

INSTRUCTIONS: Write **E** in the blank if the material is *heterogeneous* or **O** if it is *homogeneous*.

1. Wood _____
2. Freshly-brewed black coffee _____
3. Water _____
4. Lucky Charms® _____
5. Salt _____
6. Dirt _____
7. Sausage-and-mushroom pizza _____
8. Air _____
9. Milk _____
10. Gold _____

INSTRUCTIONS: Classify each of the following as an *element* [**E**], a *compound* [**C**], or a *mixture* [**M**].

11. Gold _____
12. Water _____
13. Seawater _____
14. Sugar _____
15. A chocolate sundae _____
16. Air _____
17. Carbon dioxide _____
18. Silver _____
19. Ice _____
20. A Big Mac® _____

INSTRUCTIONS: Classify each of the following properties of matter as *physical* [**P**] or *chemical* [**C**].

21. Color _____
22. Density _____
23. Burns easily (flammable) _____
24. Not affected by acids _____
25. Boils at 450 °C _____
26. Reacts violently with chlorine _____
27. Good conductor of heat _____
28. Dissolves readily in water _____
29. Melts at 145 °C _____
30. Malleable _____

INSTRUCTIONS: Classify each of the following changes in matter as *physical* [**P**] or *chemical* [**C**].

31. Grinding chalk into powder _____
32. Dissolving salt in water _____
33. Dissolving zinc in acid _____
34. Tearing a piece of paper _____
35. Stretching copper into wire _____
36. Burning gasoline _____
37. Hammering gold into foil _____
38. Melting ice _____
39. Digesting food _____
40. Making hydrogen from water _____

Name_____ Date_____ Per_____

Units of Length

1. Name the units in order of their size with the smallest first.

_____ _____ _____ _____

2. Write the abbreviation for:

meter_____ centimeter_____ millimeter_____ decimeter_____

3. Write the missing numerals.

1m=_____dm	2m=_____mm	1000mm=_____m
1m=_____cm	4m=_____cm	200dm=_____m
1m=_____mm	5m=_____dm	700cm=_____m
1dm=_____mm	40dm=_____ mm	130cm=_____m
1dm=_____cm	100dm=_____m	500mm_____dm
10dm=_____m	20dm=_____cm	30m=_____dm
1cm=_____mm	500cm=_____m	4m=_____cm
10cm=_____dm	40cm=_____mm	120mm=_____cm
100cm=_____m	150cm=_____dm	27dm=_____cm

4. Measure each line segment to the nearest cm.

a._____ b._____

c.____ d._____

a.=_____ c.=_____

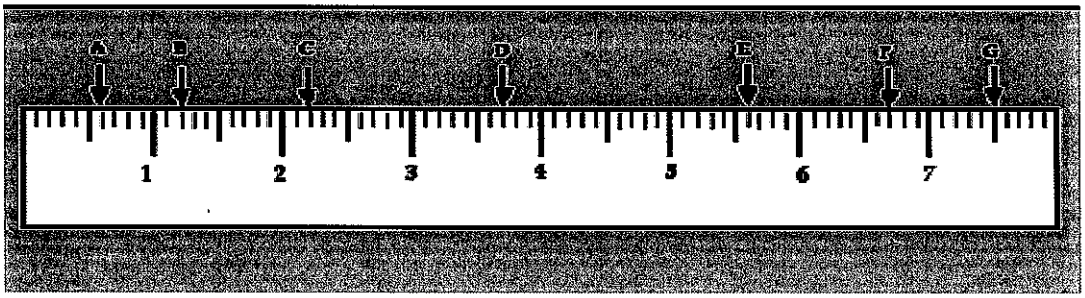
b.=_____ d.=_____

Christina Bryant

The beauty of the metric system is that it is **based on the number 10.**

- The diagram below shows you a section of a metric ruler.
- Each numbered line represents one centimeter.
- Each small mark after the numbered lines represents **one tenth of a centimeter.**
- The larger mark between numbered lines represents five tenths of a centimeter.
- This allows you to easily see the number of lines over the whole centimeter that an object measures.

In the metric system, we always use decimals, never fractions.



Instructions

1. Look at the diagram of part of a metric ruler. Above it are some arrows with letters.
2. Look at the letter, determine the measurement and
3. You **must always** include a unit like centimeter in your answers.

You may use abbreviations. Below are some abbreviations for common metric linear measures.

Millimeter	mm	Centimeter	cm	Decimeter	dm
Meter	m	Kilometre	km		

a._____ d._____

b._____ e._____

c._____ f._____

g._____

Christina Bryant

Metric Mania

Name _____

Lesson 1: Length

1. Which is longer? Circle your choice for each one.

1 mile or 1 kilometer 1 yard or 1 meter 1 inch or 1 centimeter

2. Complete each statement.

1 mi = _____ km 1 yd = _____ m 1 in = _____ cm

3. The basic unit of length in the metric system in the _____ and is represented by a lowercase ____.

4. The meter is defined as the _____ traveled by _____ in absolute vacuum in 1/299,792,458 of a second.

5. Complete each statement.

1 km = _____ m 1 m = _____ cm 1 m = _____ mm

6. Which is larger? Circle your choice for each one.

A. 1 meter or 105 centimeters

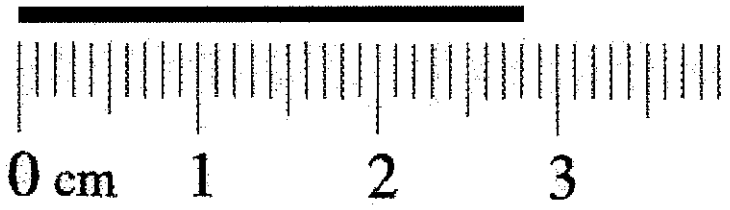
B. 4 kilometers or 4400 meters

C. 12 centimeters or 102 millimeters

D. 1200 millimeters or 1 meter

7. How many millimeters are in 1 centimeter? _____

8. Use the ruler and line below to answer the questions.



What is the length of the line in centimeters? _____cm

What is the length of the line in millimeters? _____mm

What is the length of the line to the nearest centimeter? _____cm
HINT: Round to the nearest centimeter – no decimals.