Metric System & SI Units

Name _____

Scientists all over the world use the same system of units so they can communicate information clearly. This system of measurement is called the **International System of Units (SI)**. Metric measurement is based on the number ten and makes calculations with the system relatively easy. By using the following conversion chart, converting from one unit to another is done simply by moving the decimal point:

Mega-	*	*	**kilo-**	**hecto-**	**deka-**	_____	**deci-**	**centi-**	**milli-**	*	*	**micro-**	*	*	**nano-**
M	*	*	**k**	**h**	**dk**	_____	**d**	**c**	**m**	*	*	**μ**	*	*	**n**

The blank line in the middle of the conversion chart can change depending on what we are measuring:
The unit for length is the meter (m).
The unit for mass is the gram (g).
The unit for volume is the liter (L).
The unit for time is the second (s)
The unit for computer information is bytes (b)

PART A

What type of measurement is indicated by each of the following units? Choices are in the last column.

1. ms _____
2. s _____
3. km _____
4. g _____
5. cm^3 _____
6. mm _____
7. Mb _____
8. L _____
9. kg _____

information
length
mass
time
volume

PART B

For each of the following commonly used measurements, indicate its symbol. Use the symbols to complete the following sentences with the most appropriate unit. Units may be used more than once or not at all.

_____ milliliter _____ milligram _____ kilobyte _____ centimeter

_____ kilogram _____ millimeter _____ second _____ gram

_____ meter _____ liter _____ Megabyte

1. Colas may be purchased in two or three _____ bottles.
2. The mass of a bowling ball is 7.25 _____.
3. The length of the common housefly is about 1 _____.
4. The mass of a paperclip is about 1 _____.
5. One teaspoon of cough syrup has a volume of 5 _____.
6. Stand with your arms raised out to your side. The distance from your nose to your outstretched fingers is about 1 _____.
7. On a statistical basis, smoking a single cigarette lowers your life expectancy by 642,000 _____, or 10.7 minutes.
8. A 4 minute song saved on the computer is about 5000 _____.

PART C

Convert the following metric measurements:

1) 1000 mg = _____ g

2) 160 b = _____ hb

3) 109 g = _____ dg

4) 250 L = _____ kL

5) 14 km = _____ m

6) 1 s = _____ ms

7) 480 cm = _____ dkm

8) 27 g = _____ ks

9) 198 dg = _____ kg

10) 75 mL = _____ μL

11) 50 cs = _____ ms

12) 5 dL = _____mL

13) 16 dm = _____nm

14) 65 Mg = _____ mg

15) 2500 db = _____ kb

16) 355 mL = _____ dkL

17) 8 ms = _____ ns

18) 6.3 cm = _____ mm

19) 5.6 dkb = _____ cb

20) 26,000 cm = _____ m

21) 56,500 nm = _____ Mm

22) 27.5 μg = _____ cg

23) 923,000 nL = _____ L

24) 0.025 km = _____ cm