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-	* *	r	kilo-	hecto-	deka-	 deci-	centi-	milli-	*	*	micro-	*	*	nano-
Μ	*	*	k	h	dk	 d	с	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 time is the second (s)The unit for mass is the gram (g).The unit for computer information is bytes (b)The unit for volume is the liter (L).The unit for computer information is bytes (b)

PART A

What type of measurement is indicated by each of the following units?

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

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 one or two _____ bottles.

2) The mass of a bowling ball is 7.25 _____.

3) The length of the common housefly is about 1 _____.

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	13) 198 dg = kg
2) 8 ms = ns	14) 160 b = hb
3) 75 mL = μL	15) 6.3 cm = mm
4) 109 g = dg	16) 50 cs = ms
5) 5.6 dkb = cb	17) 250 L = kL
6) 5 dL =mL	18) 26,000 cm = m
7) 14 km = m	19) 16 dm =nm
8) 56 <i>,</i> 500 nm = Mm	20) 1 s = ms
9) 65 Mg = mg	21) 27.5 μg = cg
10) 480 cm = dkm	22) 2500 db = kb
11) 923,000 nL = L	23) 27 g = ks
12) 355 mL = dkL	24) 0.025 km = cm

25) Mabel measures the distance between her house and school to be 759000 mm. What other metric measurements would make more sense to measure this distance in? What would these measurements be?