

Name: \_\_\_\_\_ Per \_\_\_\_\_

## Scientific Notation and the Metric System

### Practice Sheet #1

Due: \_\_\_\_\_

1. Are these values larger or smaller than 1?

- a) 0.0067 g \_\_\_\_\_    b)  $3.9 \times 10^4$  m \_\_\_\_\_    c)  $4.99 \times 10^{-7}$  kg \_\_\_\_\_  
 d) 95,000 km \_\_\_\_\_    e) 80 L \_\_\_\_\_    f)  $2.6 \times 10^{-3}$  mm \_\_\_\_\_

2. Complete the following conversions

Expanded Notation	Scientific Notation
a) 13,994 kWh	_____
b) _____	$2.108 \times 10^3$ kWh
c) 6009 kWh	_____
d) 0.337 kg	_____
e) _____	$1.3 \times 10^{-1}$ kg
f) _____	$2.04 \times 10^{-8}$ kg
g) 0.128 kg	_____
h) 1,762.44 qt	_____
i) _____	$6.34013 \times 10^5$ m
j) 188,091 ft	_____

Metric Conversions		
Prefix	Symbol	Magnitude
Giga	G	$10^9$
Mega	M	$10^6$
Kilo	k	$10^3$
Hecto	h	$10^2$
Deca	da	10
Basic unit	-	1
Deci	d	$10^{-1}$
Centi	c	$10^{-2}$
Milli	m	$10^{-3}$
Micro	$\mu$ (greek letter)	$10^{-6}$
nano	n	$10^{-9}$

3. Fill in the chart like the example shown below.

<i>ex</i>	nL	=	nanoliter	=	$10^{-9}$ liters	=	Smaller than a liter
a)	mg	=	_____	=	_____	=	_____
b)	$\mu$ L	=	_____	=	_____	=	_____
c)	Mg	=	_____	=	_____	=	_____
d)	hm	=	_____	=	_____	=	_____
e)	mL	=	_____	=	_____	=	_____
f)	millimeter	=	_____	=	_____	=	_____
g)	centigram	=	_____	=	_____	=	_____
h)	Kilosecond	=	_____	=	_____	=	_____

4. Convert each of the following.

a) 835 mL into Liters

b)  $9.834 \times 10^{-2}$  cm into meters

c) 4,000 Gg into grams

d)  $9.43 \times 10^8$  gallons into liters

e) 17,987,234 cm into Mm

f) 8.95 acres into meters squared ( $m^2$ )

g)  $8.9 \times 10^7 m^2$  into  $cm^2$

h)  $324 cm^3$  into  $in^3$

i)  $1.98 \times 10^{18}$  mi into km