

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

### Chemistry Practice: Units, Prefix Conversions and Scientific Notation

1. Use the letter to rank the following units from smallest to largest:

A- Mg      B- mg      C- g      D- cg      \_\_\_\_\_

A- 150 mm      B- 150 m      C- 150 cm      D- 150 km      \_\_\_\_\_

A- 2 ns      B- 0.1  $\mu$ s      C- 5 Gs      D- 60 s      \_\_\_\_\_

2. Convert the following.

a.) 0.3 km = \_\_\_\_\_ cm

h.) 19 mL = \_\_\_\_\_ L

b.) 2.4  $\mu$ g = \_\_\_\_\_ mg

i.) 7.2 mm = \_\_\_\_\_ cm

c.) 580 mL = \_\_\_\_\_ L

j.)  $2 \times 10^{-2}$  g = \_\_\_\_\_ mg

d.) 2100 mK = \_\_\_\_\_ K

k.)  $2 \times 10^{-1}$  nm = \_\_\_\_\_ m

e.) 64000 cm = \_\_\_\_\_ m

l.)  $2.5 \times 10^5$  Gs = \_\_\_\_\_ s

f.) 580 cm<sup>3</sup> = \_\_\_\_\_ dm<sup>3</sup>

m.) 0.035 L = \_\_\_\_\_ mL

g.) 320  $\mu$ s = \_\_\_\_\_ ns

n.)  $8.3 \times 10^{15}$  mL = \_\_\_\_\_ cm<sup>3</sup>

4. Calculate the following and express your answer in scientific notation with the proper units:

a.)  $2.1 \times 10^3$  m  $\times$   $1.5 \times 10^{-6}$  m =

d.)  $3.2 \times 10^{-7}$  kg /  $1.6 \times 10^{-9}$  s =

b.)  $\frac{2.7 \times 10^{12} \text{ g}}{4.26 \times 10^{11} \text{ mL}} =$

e.)  $2 \times 10^4$  kJ /  $1.2 \times 10^2$  g =

c.)  $\frac{3.5 \times 10^4 \text{ kg}}{(2.5 \text{ m} \times 3.6 \text{ m})} =$

f.)  $3.5 \times 10^{20}$  atoms / 0.125 L =