

Chem I

Name _____

Date _____ Per _____

Worksheet #5: Conversion Practice

Solve, using units, sig figs, and showing your set-ups for each.

I. Given the following exact equalities:

$$\begin{array}{l} 4 \text{ piks} = 1 \text{ jab} \qquad 3 \text{ gleps} = 2 \text{ borks} \qquad 3 \text{ toves} = 5 \text{ borks} \\ 5 \text{ jabs} = 2 \text{ snubs} \qquad 5 \text{ gleps} = 1 \text{ snub} \qquad 1 \text{ tove} = 5 \text{ piks} \end{array}$$

1) $5 \text{ gleps} = \underline{\hspace{2cm}} \text{ snubs}$

2) $12 \text{ piks} = \underline{\hspace{2cm}} \text{ gleps}$

3) $25 \text{ borks} = \underline{\hspace{2cm}} \text{ toves}$

4) $8 \text{ snubs} = \underline{\hspace{2cm}} \text{ piks}$

5) $800 \text{ gleps} = \underline{\hspace{2cm}} \text{ toves}$

II. Metric Conversions: use the chart titled "SI Prefixes" to convert the following:

6) How many meters are in 3.98 kilometers?

7) How many bytes are in 29.22 gigabytes?

8) How many milliliters are in 467.9 centiliters?

9) How many picograms are in .0876 centigrams?

10) How many millimeters are in 3.50 kilometers?

11) How many terabytes are in 2.5×10^4 kilobytes?

12) How many liters are in 3.65×10^{12} milliliters?

III. Using density as a conversion factor. Solve, showing your set-ups for each.

Table of Known Densities:

Metal	Density	Metal	Density
aluminum	2.702 g/cm ³	magnesium	1.745 g/cm ³
barium	3.51 g/cm ³	mercury	13.546 g/cm ³
calcium	1.54 g/cm ³	titanium	4.50 g/cm ³
lithium	0.534g/cm ³	platinum	21.45 g/cm ³
copper	8.92 g/cm ³	silicon	2.33 g/cm ³
gold	19.31 g/cm ³	silver	10.5 g/cm ³
iron	7.86 g/cm ³	tin	7.28 g/cm ³
lead	11.34 g/cm ³	zinc	7.14 g/cm ³

1.000 pounds = 0.4536 kilograms

1 cm³ = 1 cc = 1 mL

1.000 grams = 0.0353 ounces

1.000 teaspoons = 4.9289 mL

13) 46.9 cm³ zinc = _____ grams zinc

14) 150. grams Si = _____ cm³ Si

15) 54.89 cm³ Mg = _____ ounces Mg

16) 98.7 ounces gold = _____ mL gold

17) 709 pounds Hg = _____ liters Hg

18) 323 teaspoons copper = _____ pounds copper