**Unit 1 Study Guide**

Convert the following numbers into scientific notation

1,870,000 0.000023 130,000 0.00045

Convert the following numbers to standard form:

1.26x104 5.89x 10-6 9.0x106 3.42x10-3

How many significant figures are in the following numbers?

209 0.0050 9.00x103 .0010030

Calculate the following math problems with the correct number of sig figs:

3.28 x 1.9= 430/ 294= 1.02 + 3.299+ 4.9872=

50 x 8.90= 94.50-76.922= 3.299 + 4.390 + 2.70=

Complete the following conversions:

820 mL 🡪L 2.9 kg 🡪 mg 9,000 cm🡪 mm

Calculate the following density problems with correct sig figs and units:

What is the density of a metal with a mass of 5.90 g and a volume of 3.7 mL?

What is the volume of a metal with a mass of 27.3 grams and a density of 0.8900g/mL?

What is the density of a metal with a mass of 2.3 kg and a volume of 1,090 mL?

What is the density of a metal with a mass of 0.097 kg and a volume of 0.123 L?

Identify the following changes or words as chemical or physical changes:

Irreversible Water Evaporating Gas being produced

Ripping Paper Reversible New substance formed

Burning lighter fluid Squeezing an orange Unchanged

Identify the following as heterogeneous mixtures, homogeneous mixtures, elements or compounds:

Apple Juice Carbon Dioxide-CO2 Oil and Water

Osmium – Os Lucky Charms Gatorade

Bronze Liquid Bromine-Br2 Italian Dressing

Define the following:

Matter –

Element-

Compound-

Solid-

Liquid-

Gas-