**Unit Conversions – Notes**

# Dimensional Analysis

**1 Mg= 1 x 106 g**

**1 kg= 1000 g**

**1hg = 100 g**

**1 dag = 10 g**

**1 g = 1g**

**10 dg = 1 g**

**100 cg = 1 g**

**1000 mg = 1 g**

**1 x 106 μg = 1 g**

**1 x 109 ng = 1 g**

**1 x 1012 pg = 1 g**

**Common Conversions**

1 liter = 1.057 quarts 1 kilogram = 2.2 pounds 1 meter = 1.094 yards 1 inch = 2.54 cm

* **The “Factor-Label” Method**
* Units, or “labels” are canceled, or “factored” out

Example:

**Steps:**

1. Identify starting & ending units.

2. Line up conversion factors so units cancel.

3. Multiply all top numbers & divide by each bottom number.

4. Check units & answer.

1. How many milliliters are in 1.00 quart of milk?
2. You have 1.5 pounds of gold. Find its volume in cm3 if the density of gold is 19.3 g/cm3.
3. How many liters of water would fill a container that measures 75.0 in3?
4. Your European hairdresser wants to cut your hair 8.0 cm shorter. How many inches will he be cutting off?
5. Taft football needs 550 cm for a 1st down. How many yards is this?
6. A piece of wire is 1.3 m long. How many 1.5-cm pieces can be cut from this wire?