Chapter 1 Unit Conversion and Dimensional Analysis Review

In chemistry we are continuously making conversions using the SI system. It is vital that you are able to convert measurements if you are to be successful in chemistry.

We will use the parentheses method of dimensional analysis to make conversions.

Let's review:

Use the table to the left and the conversion table to assist you.

1. My house in Hamburg is 45 km away. How far is this is meters?

How far is this in millimeters?

Prefixes for Powers of 10

Prefix	Symbol	Notation
tera	T	10^{12}
giga	G	10^{9}
mega	M	10^{6}
kilo	k	10^{3}
deci	d	10^{-1}
centi	c	10^{-2}
milli	m	10^{-3}
micro	μ	10^{-6}
nano	n	10^{-9}
pico	p	10^{-12}

Make the following conversions:

1) 3.4 liters to milliliters

2) 876 millimeters to meters

3) 78,999 milligrams to grams

4) 0.9 centigrams to grams

5) 112 meters to millimeters

6) 45 meters to centimeters

7) 11.7 grams to kilograms

8) 0.0009 kiloliters to liters

9) 44 centimeters to meters

10) 277 kilograms to grams