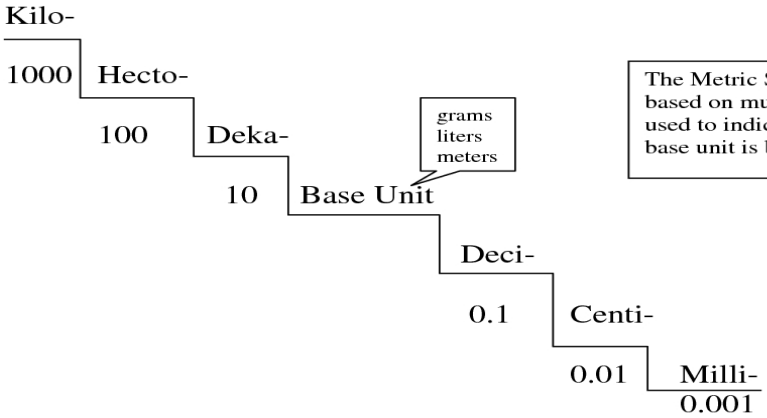
Name: _____
Mr. Willis
Conceptual Physics: _____
Date: _____

Unit I
Introduction to Conceptual Physics
Need extra help?
Check out *http://www.bayhicoach.com*

I

Metric Conversion: Stair-Step Method



The Metric System of measurement is based on multiples of 10. Prefixes are used to indicate what multiple of 10 the base unit is being multiplied by.

The prefix Kilo (k) - means 1000 times.
The prefix Hecto (h) - means 100 times
The prefix Deka (dk) - means 10 times.
The prefix Deci (d) - means 0.1 times.
The prefix Centi (c) - means 0.01 times.
The prefix Milli (m) - means 0.001 times.

Base Units will include the gram (g), liter (L) , and meter (m) and will have no prefix.

To use the Stair-Step method, find the prefix the original measurement starts with. (ex. *milli*gram) If there is no prefix, then you are starting with a base unit. Find the step which you wish to make the conversion to. (ex. *deci*gram) Count the number of steps you moved, and determine in which direction you moved (left or right). The decimal in your original measurement moves the same number of places as steps you moved and in the same direction. (ex. *milli*gram to *deci*gram is 2 steps to the left, so 40 *milli*grams = .40 *deci*grams) If the number of steps you move is larger than the number you have, you will have to add zeros to hold the places. (ex. *kilo*meters to meters is three steps to the right, so 10 *kilo*meters would be equal to 10,000 meters)

That's all there is to it! You need to be able to count to 6, and know your left from your right!

1) Write the equivalent measurement: (.5 pt each)

a) 5 dm = _____m
b) 4 mL = _____L
c) 8 g = _____mg
d) 9 mg = _____g
e) 2 mL = _____L
f) 6 kg = _____g
g) 4 cm = _____m
h) 12 mg = _____ g
i) 6.5 cm^3 = _____L
j) 7.02 mL = _____cm^3
k) .03 hg = _____ dg
l) 6035 mm = _____cm
m) .32 m = _____cm
n) 38.2 g = _____kg