Name:_____ #: _____ Class:_____ Period:_____ Math

DO NOT LOSE THIS HANDOUT…I'm warning you… it's as valuable as gold… but don't try to sell it… okay, I'm done ☺

Lesson 4.2 Converting in the Metric System

Some Good News: Before we begin, let's be positive. The *Metric System* is much easier to use than the *Customary System*, because you do not have to remember different conversions such as 12 inches equal 1 foot. All you need to know is how to **multiply** & **divide** by powers of ten **{AKA: Move the decimal to the right (X) or left (÷)}**

The Hardest Part: Remembering all of those **PREFIXES** and the order they go in (it makes a big difference, so don't mix them up.) Let's memorize a mnemonic device to help us!

Mnemonics

For the prefixes **K**ilo-, **H**ecto-, **D**eka-, then the **Base** unit (such as meter, gram, liter), then the prefixes **D**eci-, **C**enti-, **M**illi-:

Kings Have Diamonds But Diamonds Cost Money

Nifty Chart Alert!!!

÷ 1000	÷ 100	÷ 10	Base unit	X 10	X 100	X 1000
Kilo-	Hecto-	Deka-	**meter gram liter**	Deci-	Centi-	Milli-
X 1000	X 100	X 10	Base unit	÷ 10	÷ 100	÷ 1000

To use the chart, first you look at the conversion you are trying to figure out…

Example: Convert **34,000 Milliliters** to **Liters.**

1. Start by finding **Milli-** on the chart.
2. Count how many places over it takes to get to **liter…** _____
3. **Which direction did you move?** _____
4. **Since you moved 3 places to the left you will also move your decimal 3 places to the left.**
5. 34,000   so… 34,000 mL = _____L

Does My Answer Make Sense?

*When going from a SMALL unit to a BIG unit (moving to the **LEFT**) your answer should be SMALLER than the original number!!

*When going from a BIG unit to a SMALL unit (moving to the **RIGHT**) your answer should be BIGGER than the original number!!

So, remember,

LEFT, SMALL to BIG, Answer is SMALLER

RIGHT, BIG to SMALL, Answer is BIGGER

Handy Chart of Basic Conversions…

METRIC CONVERSIONS					
1 centimeter	=	10 millimeters	1 cm	=	10 mm
1 meter	=	100 centimeters	1 m	=	100 cm
1 kilometer	=	1000 meters	1 km	=	1000 m

STANDARD CONVERSIONS					
1 foot	=	12 inches	1 ft	=	12 in
1 yard	=	3 feet	1 yd	=	3 ft
1 yard	=	36 inches	1 yd	=	36 in
1 mile	=	1760 yards	1 mi	=	1760 yd

Sneak Peek to our next lesson…

Fun Tip:

Check out the Rap that goes with this lesson on the Math Website!

FYI…this handout can be found on the math website…in case you do actually lose it… ☹