Name: _____ Class Period: __

## UNIT CONVERSIONS PRACTICE

Math Skills Example-

Conversions: A roll of copper wire contains 15 m of wire. What is the length of the wire in centimeters?

1) **List the given and unknown values.**
   **Given:** *length in meters, l* = 15m
   **Unknown:** *length in centimeters* = ? cm
2) **Determine the relationship between units.**
   Look at a conversion table. You can find that 1 cm = 0.01 m.
   This also means that 1 m = 100 cm.
   You will multiply because you are converting from a larger unit (meters) to a smaller unit (centimeters).
3) **Write the equation for the conversion.**
   *length in cm* = m X $\frac{100\ cm}{1\ m}$
4) **Insert the known values into the equation, and solve.**
   *length in cm* = 15 ~~m~~ X $\frac{100\ cm}{1\ \cancel{m}}$
   *length in cm* = 1500 cm

| Prefixes | Value | Standard form | Symbol |
|---|---|---|---|
| Tera | 1 000 000 000 000 | $10^{12}$ | T |
| Giga | 1 000 000 000 | $10^{9}$ | G |
| Mega | 1 000 000 | $10^{6}$ | M |
| Kilo | 1 000 | $10^{3}$ | k |
| deci | 0.1 | $10^{-1}$ | d |
| centi | 0.01 | $10^{-2}$ | c |
| milli | 0.001 | $10^{-3}$ | m |
| micro | 0.000 001 | $10^{-6}$ | μ |
| nano | 0.000 000 001 | $10^{-9}$ | n |
| pico | 0.000 000 000 001 | $10^{-12}$ | p |

## Try some on your own:

1. Write 550 *milli*meters as meters.

2. Write 3.5 seconds as *milli*seconds.

3. Convert 1.6 *kilo*grams to grams.

4. Convert 4 *centi*meters to *micrometers.*