Conversions extra Practice 5

Conversions Study Session Name: _____

Have Out:
- List of conversions your teacher has given you
- A calculator
- Pencil

Setting up conversions correctly is important to showing your work and being able to correctly use conversions in the Moles and Stoichiometry units. Follow the steps below to set up conversions.

Example:

How many minutes are in 2.5 hours?

- What do you know about the problem?
  - 2.5 hours
  - 1 hour = 60 minutes

$$2.5 \text{ hours} \times \frac{60 \text{ minutes}}{1 \text{ hour}} = 150 \text{ minutes}$$

Directions:
1. Identify what you know about the problem. What numbers are involved? What conversion factors can be used to get you from your starting to your ending point?
2. Start with the number given in the problem. (Ex: 2.5 hours)
3. Set up the conversion factor so that the units cancel.
   Whatever is on top in one should be on the bottom in the next.
4. Multiple/Divide across the conversion factors and report your answer in significant figures.

1. Convert 2.36 g to kg

   What Do You Know:

   Complete Calculation Here:

2. Convert 9.0 g to lbs

   What Do You Know:

   Complete Calculation Here:

3. Convert 0.32 m to mm

   What Do You Know:

   Complete Calculation Here:

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1. Convert 2.36 g to kg

What Do You Know:

$1000\,g = 1\,kg$

Complete Calculation Here: $2.36\,g \left| \frac{1\,kg}{1000\,g} \right| = 0.00236\,kg$ (3SF)

$2.36 \times 10^{-3}\,kg$

2. Convert 9.0 g to lbs

What Do You Know:

$1\,lb = 453.6\,g$

Complete Calculation Here: $9.0\,g \left| \frac{1\,lb}{453.6\,g} \right| = 0.019841\,lb$ (2SF)

$2.0 \times 10^{-2}\,lb$

3. Convert 0.32 m to mm

What Do You Know:

$1000\,mm = 1\,m$

Complete Calculation Here: $0.32\,m \left| \frac{1000\,mm}{1\,m} \right| = 320\,mm$ (2SF)

$320\,mm$