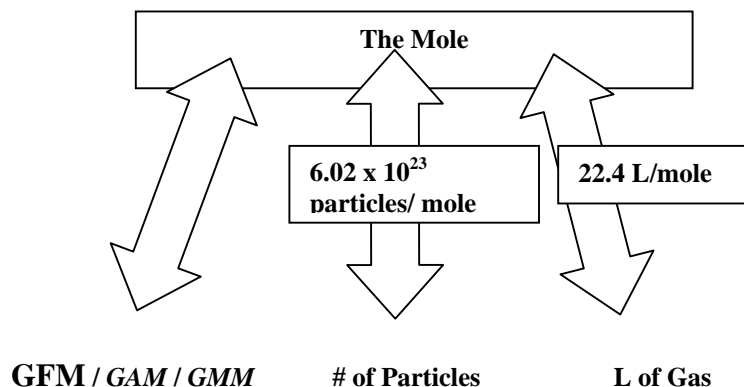


Review Sheet. Chapter 6. Mole Road, % composition, empirical and molecular formulas.



Double Conversions convert: GFM/GAM/GMM, to the mole, or the reverse.
of particles, to the mole, or the reverse.
L of gas to the mole, or the reverse.

Triple Conversions convert: GFM/GAM/GMM to # particles, or the reverse.
of particles to L of Gas, or the reverse.
L of gas to GFM/GAM/GMM, or the reverse.

Begin all conversions with the question: what is my given? The GFM/GAM/GMM may need to be derived. If you are converting to or from moles, this is a double conversion, and the factor label method will look like:

$$\underline{\text{given (old units)}} \times \frac{\underline{\text{new units}}}{\underline{\text{old units}}} = \text{answer in new units}$$

If you are doing a triple conversion, the factor label method will look like:

$$\underline{\text{given (old units)}} \times \frac{\underline{\text{moles}}}{\underline{\text{old units}}} \times \frac{\underline{\text{new units}}}{\underline{\text{moles}}} = \text{answer in new units}$$

Sometimes we must be able to conceptualize what a mole is, and in these cases it is necessary to reflect on what mole road looks like. End all mole conversions and problems with the question, "What units am I looking for?" The asking of these questions will help you determine what math processes you need to do.

In addition to the factor label method, you must be able to do:

Gram Molecular Mass determination. See example 4, page 151 in your book.

Gram Formula Mass determination. See example 5, page 152 in your book.

Percent Composition of a compound. See example 12, page 162,

example 13, page 163 and example 14, page 164.

Empirical Formula determination. See example 15, page 167.

Molecular Formula determination. See example 16, page 169.

Fold this paper along the dotted line.

In our class review, we will have worked the following problems in class. Also, you should do the following homework problems on your own and check to see if you have the correct answers. Don't look at the answers until you've done the work on your own! These problems will help you prepare for your test. Some of you may not need to do all these problems. Do the problems that you need to do according to your abilities and according to how well you understood the problems we worked out in class.

Problem:	In class, we did:	Your at home problem:	Answer to your at home problem:
41	a	c	9
46	d	e	89.0 g
47	c	a	60.1 g
48	c	e	5.93 mole $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$
49	c	d	238 g H_2O_2
50	a	b	9.9 L C_2H_6
52	b	c	3.13×10^{-25} atoms
53		c	41.7 % Mg, 54.9% O, 3.4% H
55	class discussion		
56	homework	c	$\text{Sn}_2\text{FeC}_6\text{N}_6$
57	a, b, c		
58	a	c	$\text{C}_6\text{H}_{10}\text{O}_4$
59	homework	b	$\text{C}_4\text{O}_4\text{H}_8$