

Chapter 3 Fill-In Notes

I. The Mole and the Atom

A. Mole is also based on _____

B. 1 mole = _____ = _____

C. Sample calculations:

D. Molar mass = _____ = _____

II. Percent Composition

A. If given a formula, you can find a compound's percent composition.

1. First, _____.

2. Second, _____.

3. Repeat for _____.

4. Check answer to make sure that _____.

B. Examples

1. sodium oxalate

2. acetic acid

3. calcium carbonate tetrahydrate

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III. Empirical Formula

A. _____ to _____ (if it hasn't been done yet)

1. Assume that _____ = _____
2. For example: _____ = _____

B. _____ to _____

1. _____ each element's mass by its corresponding _____.

C. _____ by _____

1. Divide _____ by _____

D. _____ 'til _____

1. If you end up with _____, multiply all the values by _____ to end up with all _____.
2. This is the _____.

IV. Molecular Formula

A. If a problem includes a _____ (_____), you need to solve for _____.

B. Solve for the _____.

C. Find the molecular mass of _____.

D. Divide _____ by mass of _____.

E. Multiply answer _____ by the _____ in the empirical formula to get your _____.

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V. Balancing Chemical Equation Hints

A. _____ Reactions

1. Balance _____ last.
2. If _____ ends up being a half, multiply all _____ by two to create _____.

B. _____

1. Treat them as _____
2. For example: _____ --> 2 nitrates is easier than 2 nitrogens and 6 oxygens.

C. When in doubt, use redox (next chapter)

D. A word about states (g and s)

VI. _____

A. An AP Fave!!!

1. Use stoich to:
2. You get amount of O by _____.

B. Usually involves _____.

C. Example...

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VII. _____

A. Write out _____ if you are given words.

B. _____ chemical equation.

C. _____ what you know.

D. Use _____ to find out what it unknown.

1. Most of these problems will use the _____

2. This ratio is given through the _____.

VIII. _____ and Theoretical Yield

A. Write down what you know under the balanced chemical equation.

B. Convert both values to _____.

C. Choose the reactant that has a _____

1. This is the _____.

2. The other reactant is the _____.

D. Carry out the calculation as usual to find _____.

IX. _____.

A. The problem will state the _____.

B. Calculate your _____.

C. Use this equation:

D. Should always be _____.

E. If $> 100\%$, there are _____

A word about the PT

Done with Chapter 3!