

CHEMISTRY Concept Reflection

GENERAL INFORMATION

Read the kwanga.net “chem suggestions for success”:

<http://kwanga.net/chem-success.html>

- 1) What were your chemistry strengths last semester? What did you do well?
 - 2) What skills and concepts could you improve upon from last semester?
 - 3) What is your plan to improve your retention of information this semester?
 - 4) What is your plan to improve your chemistry grades this semester?
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DIMENSIONAL ANALYSIS AND MOLE MATH

- 5) Why are sig. figs. important in scientific math problems?
 - 6) What is a conversion factor?
 - 7) Describe how D.A. (dimensional analysis) works.
 - 8) How many grams are in 0.1200 moles of iron? Show all work and units.
 - 9) Calculate the number of moles in 5.044×10^{22} atoms of Be. Show all work and units.
 - 10) Convert 8.50 L of oxygen gas to moles of oxygen gas at STP. Show all work and units.
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CHEMICAL FORMULAS

- 11) Explain how to determine the number of “dots” (valence electrons) in an element.
- 12) List the monatomic ion charges for the periodic table groups (our “charge chant”).
- 13) List all relevant characteristics of a BI (binary ionic) compound.
- 14) Explain how BI compounds are named.
- 15) Give an example – a name and chemical formula - of a BI compound.
- 16) List all relevant characteristics of a BM (binary molecular) compound.
- 17) Explain how BM compounds are named.
- 18) Give an example – a name and chemical formula - of a BM compound.
- 19) List all relevant characteristics of a TI (ternary ionic) compound.
- 20) Explain how TI compounds are named.
- 21) Give an example – a name and chemical formula - of a TI compound.
- 22) List all relevant characteristics of an OTHER ionic compound.
- 23) Explain how OTHER ionic compounds are named.
- 24) Give an example – a name and chemical formula - of an OTHER ionic compound.
- 25) How do Roman numerals work in naming ionic compounds?
- 26) How do prefixes work in naming molecular compounds? List the ten prefixes here.
- 27) List the formulas and names of the six major acids from the chemical reference sheet.
- 28) List the names, formulas, and charges of the 21 polyatomic ions you need to know.
- 29) List the names and formulas for the seven diatomic molecules (our “Super Seven”).
- 30) How can you tell if a molecule is polar or non-polar?