

CHAPTER REVIEW

For more practice, go to the Problem Bank in Appendix D.

Chemical Names and Formulas

SECTION 1 REVIEW

- What are monatomic ions?
 - Give three examples of monatomic ions.
- How does the chemical formula for the nitrite ion differ from the chemical formula for the nitrate ion?
- Using only the periodic table, write the symbol of the ion most typically formed by each of the following elements:
 - K
 - Ca
 - S
 - Cl
 - Ba
 - Br
- Write the formula for and indicate the charge on each of the following ions:
 - sodium ion
 - aluminum ion
 - chloride ion
 - nitride ion
 - iron(II) ion
 - iron(III) ion
- Name each of the following monatomic ions:
 - K^+
 - Mg^{2+}
 - Al^{3+}
 - Cl^-
 - O^{2-}
 - Ca^{2+}
- Write formulas for the binary ionic compounds formed between the following elements. (Hint: See Sample Problem A.)
 - sodium and iodine
 - calcium and sulfur
 - zinc and chlorine
 - barium and fluorine
 - lithium and oxygen
- Give the name of each of the following binary ionic compounds. (Hint: See Sample Problem B.)
 - KCl
 - $CaBr_2$
 - Li_2O
 - $MgCl_2$
- Write the formulas for and give the names of the compounds formed by the following ions:
 - Cr^{2+} and F^-
 - Ni^{2+} and O^{2-}
 - Fe^{3+} and O^{2-}
- What determines the order in which the component elements of binary molecular compounds are written?
- Name the following binary molecular compounds according to the prefix system. (Hint: See Sample Problem D.)
 - CO_2
 - CCl_4
 - PCl_5
 - SeF_6
 - As_2O_5
- Write formulas for each of the following binary molecular compounds. (Hint: See Sample Problem D.)
 - carbon tetrabromide
 - silicon dioxide
 - tetraphosphorus decoxide
 - diarsenic trisulfide
- Distinguish between binary acids and oxyacids, and give two examples of each.
- What is a salt?
 - Give two examples of salts.
- Name each of the following acids:
 - HF
 - HBr
 - HNO_3
 - H_2SO_4
 - H_3PO_4
- Give the molecular formula for each of the following acids:
 - sulfurous acid
 - chloric acid
 - hydrochloric acid
 - hypochlorous acid
 - perchloric acid
 - carbonic acid
 - acetic acid

PRACTICE PROBLEMS

- Write formulas for each of the following compounds:
 - sodium fluoride
 - calcium oxide
 - potassium sulfide
 - magnesium chloride
 - aluminum bromide
 - lithium nitride
 - iron(II) oxide