

Grade 10 Chemistry Review

Bohr Diagrams and Forming Compounds

1. a. Draw the Bohr diagrams of sodium and oxygen.

- b. Show the formation of sodium oxide using the Bohr diagrams.

2. a. Draw the Bohr diagrams of a carbon atom and a hydrogen atom.

- b. Show the formation of carbon tetrahydride (methane) using the Bohr diagrams.

Writing Chemical Formula and Nomenclature

- a. **Ionic compounds with monoatomic ions:** Give the chemical formula

magnesium chloride _____ aluminum oxide _____

- b. **Ionic compounds with polyatomic ions:** Give the chemical formula

barium hydroxide _____ ammonium sulfate _____

- c. **Ionic compounds with multivalent metal ions:** Give the chemical formula

iron(III) chloride _____ cobalt(II) iodide _____

- c. **Ionic compounds with multivalent metal ions and polyatomic ions:** Give the chemical formula

copper(II) nitrate _____ chromium(III) carbonate _____

- d. **Molecular compounds:** Give the chemical formula

sulfur hexafluoride _____ dinitrogen tetrahydride _____

Naming Compounds: Give the IUPAC name

CaCl₂ _____ Sr(OH)₂ _____

PF₅ _____ Fe(NO₃)₃ _____

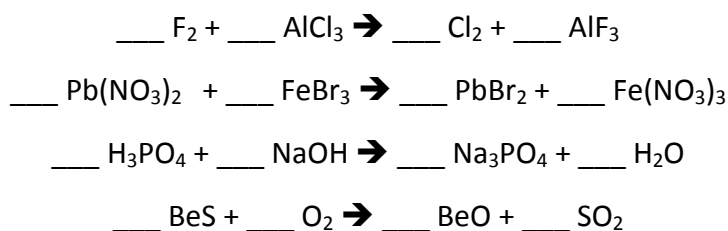
Writing Word and Chemical Equations

For each description, write the word equation (names of reactants and products) and the chemical equation (chemical formulae of reactants and products) under it.

- Solid copper and aqueous silver nitrate react to form solid silver and aqueous copper(II) nitrate.
- Solid magnesium reacts with aqueous hydrochloric acid to produce hydrogen gas and aqueous magnesium chloride.

Balancing Chemical Equations

Provide the coefficients to balance each chemical equation.



Types of Chemical Reactions

Each of the following reactions is an example of a synthesis, decomposition, single or double displacement.

- Identify the reaction type in the blank
- Write out the skeletal equation in the space provided
- Balance the equation

a. calcium + fluorine \rightarrow calcium fluoride

b. copper(II) bromide \rightarrow copper + bromine

Predicting Chemical Reactions

- Write the chemical formulae of the reactants.
- Identify the reaction type (synthesis, decomposition, single displacement, or double displacement).
- Complete the word equation.
- Write the balanced chemical equation.

a. silver nitrate + ammonium iodide \rightarrow

b. fluorine + magnesium chloride \rightarrow
