

I. Names and Charges of Monatomic Ions (excluding those derived from transition and post transition elements):

Name of ion	Metallic ion or non-metallic ion	Formula
a. magnesium ion	_____	_____
b. potassium ion	_____	_____
c. iodide	_____	_____
d. oxide	_____	_____
e. calcium ion	_____	_____
f. phosphide	_____	_____
g. chloride	_____	_____
h. selenide	_____	_____
i. lithium ion	_____	_____
j. _____	_____	Br^-
k. _____	_____	Ba^{2+}
l. _____	_____	N^{3-}
m. _____	_____	Sr^{2+}
n. _____	_____	Li^+
o. _____	_____	S^{2-}
p. _____	_____	O^{2-}
q. _____	_____	Cs^+
r. _____	_____	H^-
s. _____	_____	Rb^+

II. Fill in the Blanks

_____ ions, also known as _____, are derived from metals, while _____ ions, also known as _____, are derived from nonmetals.

III. Naming and Empirical Formulas for Binary Ionic Compounds

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|------------------------|-------|----------------------------|-------|
| a. Sodium bromide | _____ | n. Li_3N | _____ |
| b. Calcium chloride | _____ | o. K_2S | _____ |
| c. Sodium sulfide | _____ | p. BaCl_2 | _____ |
| d. Magnesium sulfide | _____ | q. AgI | _____ |
| e. Potassium iodide | _____ | r. PbCl_2 | _____ |
| f. Aluminum fluoride | _____ | s. Na_2O | _____ |
| g. Aluminum oxide | _____ | t. Mg_3P_2 | _____ |
| h. Calcium oxide | _____ | u. MgBr_2 | _____ |
| i. Potassium oxide | _____ | v. Fe_2O_3 | _____ |
| j. Iron (II) chloride | _____ | w. LiCl | _____ |
| k. Silver iodide | _____ | x. PbO_2 | _____ |
| l. Mercury (I) sulfide | _____ | y. CuS | _____ |
| m. Iron (III) bromide | _____ | z. FeO | _____ |

IV. Naming and Empirical Formulas for Ternary Ionic Compounds

- | | | | |
|-----------------------|-------|---------------------------------|-------|
| a. Ammonium chloride | _____ | j. AgClO_3 | _____ |
| b. Ammonium sulfide | _____ | k. KOH | _____ |
| c. Sodium hydroxide | _____ | l. KNO_3 | _____ |
| d. Magnesium sulfate | _____ | m. BaSO_4 | _____ |
| e. Sodium phosphate | _____ | n. KCl | _____ |
| f. Aluminum sulfate | _____ | o. CaBr_2 | _____ |
| g. Aluminum phosphate | _____ | p. Na_2O | _____ |
| h. Calcium carbonate | _____ | q. $\text{Mg}_3(\text{PO}_4)_2$ | _____ |
| i. Potassium nitrate | _____ | r. $\text{Al}_2(\text{CO}_3)_3$ | _____ |