

Worksheet: Formula Writing – Binary Compounds

(Frameworks Code)

Write the oxidation number above the name of each element. Then write the correct chemical formula for the following compounds. Note: Zinc and silver have 2+ and 1+ oxidation numbers, respectively.

1. Lithium chloride $\begin{matrix} +1 & -1 \\ \text{Li} & \text{Cl} \end{matrix}$ LiCl
2. Aluminum chloride $\begin{matrix} +3 & -1 \\ \text{Al} & \text{Cl}_3 \end{matrix}$ AlCl₃
3. Sodium bromide $\begin{matrix} +1 & -1 \\ \text{Na} & \text{Br} \end{matrix}$ NaBr
4. Zinc phosphide $\begin{matrix} +2 & -3 \\ \text{Zn}_3 & \text{P}_2 \end{matrix}$ Zn₃P₂
5. Potassium iodide $\begin{matrix} +1 & -1 \\ \text{K} & \text{I} \end{matrix}$ KI
6. Potassium oxide $\begin{matrix} +1 & -2 \\ \text{K}_2 & \text{O} \end{matrix}$ K₂O
7. Silver chloride $\begin{matrix} +1 & -1 \\ \text{Ag} & \text{Cl} \end{matrix}$ AgCl
8. Lithium nitride $\begin{matrix} +1 & -3 \\ \text{Li}_3 & \text{N} \end{matrix}$ Li₃N
9. Zinc sulfide $\begin{matrix} +2 & -2 \\ \text{Zn} & \text{S} \end{matrix}$ ZnS
10. Copper (I) oxide $\begin{matrix} +1 & -2 \\ \text{Cu}_2 & \text{O} \end{matrix}$ Cu₂O
11. Calcium oxide $\begin{matrix} +2 & -2 \\ \text{Ca} & \text{O} \end{matrix}$ CaO
12. Iron (II) chloride $\begin{matrix} +2 & -1 \\ \text{Fe} & \text{Cl}_2 \end{matrix}$ FeCl₂
13. Lithium bromide $\begin{matrix} +1 & -1 \\ \text{Li} & \text{Br} \end{matrix}$ LiBr
14. Tin (IV) phosphide $\begin{matrix} +4 & -3 \\ \text{Sn}_3 & \text{P}_4 \end{matrix}$ Sn₃P₄
15. Barium sulfide $\begin{matrix} +2 & -2 \\ \text{Ba} & \text{S} \end{matrix}$ BaS
16. Aluminum oxide $\begin{matrix} +3 & -2 \\ \text{Al}_2 & \text{O}_3 \end{matrix}$ Al₂O₃
17. Sodium fluoride $\begin{matrix} +1 & -1 \\ \text{Na} & \text{F} \end{matrix}$ NaF
18. Chromium³⁺ sulfide $\begin{matrix} +3 & -2 \\ \text{Cr}_2 & \text{S}_3 \end{matrix}$ Cr₂S₃
19. Aluminum nitride $\begin{matrix} +3 & -3 \\ \text{Al} & \text{N} \end{matrix}$ AlN
20. Iron (III) oxide $\begin{matrix} +3 & -2 \\ \text{Fe}_2 & \text{O}_3 \end{matrix}$ Fe₂O₃
21. Barium fluoride $\begin{matrix} +2 & -1 \\ \text{Ba} & \text{F}_2 \end{matrix}$ BaF₂
22. Iron (III) bromide $\begin{matrix} +3 & -1 \\ \text{Fe} & \text{Br}_3 \end{matrix}$ FeBr₃