

Topic 4.1 Chemical Formula of ionic compounds

Part A: Writing Chemical Formula (Use the criss-cross method)

1. Mg^{2+} and O^{2-}

Working: _____

Formula: _____

2. Al^{3+} and Cl^{-}

Working: _____

Formula: _____

3. Ca^{2+} and CO_3^{2-}

Working: _____

Formula: _____

4. Na^{+} and SO_4^{2-}

Working: _____

Formula: _____

5. NH_4^{+} and NO_3^{-}

Working: _____

Formula: _____

6. Ca^{2+} and Cl^{-}

Working: _____

Formula: _____

7. Mg^{2+} and NO_3^{-}

Working: _____

Formula: _____

8. Al^{3+} and O^{2-}

Working: _____

Formula: _____

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Part B: Counting Atoms

21. H_2SO_4 H = ____ S = ____ O = ____

22. $\text{Ca}(\text{OH})_2$ Ca = ____ O = ____ H = ____

23. $\text{Al}_2(\text{SO}_4)_3$ Al = ____ S = ____ O = ____

24. Na_2CO_3 Na = ____ C = ____ O = ____

Part C: Correct the Chemical Formula

25. Aluminium oxide: AlO

Correct formula: _____

26. Magnesium chloride: MgCl

Correct formula: _____

27. Calcium hydroxide: CaOH_2

Correct formula: _____

28. Sodium carbonate: NaCO_3

Correct formula: _____

Part D: Short Questions

29. What does the chemical formula H_2O tell you about the atoms present?

30. Explain why brackets are needed in $\text{Ca}(\text{OH})_2$.
