

Name _____

Polyatomic Ion Compound Chart
Total Charges on compound= zero

Write the formulas for compounds containing the following ions using the criss cross method. Make up your own compound in the last spaces.

Ions	Na ⁺	Mg ⁺²	Al ⁺³	K ⁺	H ⁺	NH ₄ ⁺
NO ₃ ⁻						
SO ₄ ⁻²						
PO ₄ ⁻³						
CO ₃ ⁻²						
NO ₂ ⁻						
SO ₃ ⁻²						
PO ₃ ⁻³						
OH ⁻						

Name the sodium compounds:

1. _____
2. _____
3. _____
4. _____

Name the ammonium compounds:

5. _____
6. _____
7. _____
8. _____

Compounds with Polyatomic Ions

I. Give the correct formula and charge for each polyatomic ion listed below

- | | |
|--------------------|--------------------|
| 1. ammonium _____ | 5. Hydroxide _____ |
| 2. acetate _____ | 6. Nitrate _____ |
| 3. carbonate _____ | 7. Phosphate _____ |
| 4. chlorate _____ | 8. Sulfate _____ |

II. Complete the chart below by 1st supplying the correct formula and charge for each ion and 2nd write the formula for the compounds that would form from the combination of the positive and negative ions. REMEMBER, if a polyatomic ion needs another subscript, you must use parentheses!

1. sodium chlorate	_____	_____
2. calcium chlorate	_____	_____
3. ammonium chlorate	_____	_____
4. potassium chlorate	_____	_____
5. copper(II) chlorate	_____	_____
6. silver chlorate	_____	_____
7. sodium sulfate	_____	_____
8. calcium sulfate	_____	_____
9. ammonium sulfate	_____	_____
10. potassium sulfate	_____	_____
11. copper(II) sulfate	_____	_____
12. silver sulfate	_____	_____
13. sodium phosphate	_____	_____
14. calcium phosphate	_____	_____
15. ammonium phosphate	_____	_____
16. copper(II) phosphate	_____	_____
17. silver phosphate	_____	_____
18. sodium chloride	_____	_____
19. calcium chloride	_____	_____
20. ammonium chloride	_____	_____
21. potassium chloride	_____	_____
22. copper(II) chloride	_____	_____
23. silver chloride	_____	_____
24. sodium hydroxide	_____	_____
25. calcium hydroxide	_____	_____
26. ammonium hydroxide	_____	_____
27. potassium hydroxide	_____	_____
28. copper(II) hydroxide	_____	_____
29. silver hydroxide	_____	_____

III. Name each compound

1. NaOH _____
2. MgCO₃ _____
3. FePO₄ _____
4. K₂SO₄ _____
5. (NH₄)₂CO₃ _____
6. Ca(ClO₃)₂ _____
7. LiC₂H₃O₂ _____
8. Cu(NO₃)₂ _____

IV. Write the correct formula for each compound

1. ammonium chloride _____
2. sodium sulfate _____
3. barium nitrate _____
4. copper (II) hydroxide _____
5. silver acetate _____
6. zinc phosphate _____
7. ammonium carbonate _____
8. calcium sulfate _____

Compounds with Polyatomic Ions (ternary)

- name the 2 parts (ion names)
- ex. NH₄Cl ammonium chloride
- Ca(NO₃)₂ calcium nitrate

Name the following:

1. CaCr₂O₇ _____
1. BaSO₄ _____
2. Li₂SO₃ _____
3. CrPO₄ _____
4. NaC₂H₃O₂ _____
5. BaOH _____
6. Fe(NO₃)₃ _____
7. KCN _____
8. SrCrO₄ _____
10. (NH₄)₂ CO₃ _____

Write the formulas for the following:

11. Aluminum sulfate _____
12. zinc nitrite _____
13. Magnesium chlorate _____
14. Sodium bicarbonate _____
15. Calcium hydroxide _____
16. Copper (II) carbonate _____
17. Ammonium sulfide _____
18. Iron (III) acetate _____
19. lithium sulfate _____
20. Strontium phosphate _____