

- Put the correct charges on the following ions.
- Fill in the table with the formula of the compounds made from the appropriate pairs of ions. Remember that the POSITIVE ion comes FIRST.

Ions	Na ⁺	Ca ²⁺	Al ³⁺	NH ₄ ⁺	Mg ²⁺	Fe (III) ³⁺
Cl ⁻	NaCl	CaCl ₂	AlCl ₃	NH ₄ Cl	MgCl ₂	FeCl ₃
O ²⁻	Na ₂ O	CaO	Al ₂ O ₃	(NH ₄) ₂ O	MgO	Fe ₂ O ₃
N ³⁻	Na ₃ N	Ca ₃ N ₂	AlN	(NH ₄) ₃ N	Mg ₃ N ₂	FeN
OH ⁻	NaOH	Ca(OH) ₂	Al(OH) ₃	NH ₄ OH	Mg(OH) ₂	Fe(OH) ₃
SO ₄ ²⁻	Na ₂ SO ₄	CaSO ₄	Al ₂ (SO ₄) ₃	(NH ₄) ₂ SO ₄	MgSO ₄	Fe ₂ (SO ₄) ₃
PO ₄ ³⁻	Na ₃ PO ₄	Ca ₃ (PO ₄) ₂	AlPO ₄	(NH ₄) ₃ PO ₄	Mg ₃ (PO ₄) ₂	FePO ₄

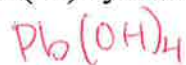
- Name the chemical compounds. Here are the rules:

- Representative metal cation + representative anion = metal + anion name with ide ending
- Transition metal cation + representative anion = metal (roman numeral for the charge of the ion) + anion name with ide ending
- If the cation or anion is a polyatomic ion, just use the name of the ion (don't add ide)
- Covalent bonds use prefixes (mono, di, tri, tetra, penta, hexa, hepta, octo plus ide at the end)

i	Li ₃ N	<u>lithium nitride</u>
C	P ₄ O ₆	<u>tetraphosphorus hexaoxide</u>
i	CuCl ₂	<u>copper (II) chloride</u>
C	N ₂ Cl ₂	<u>dinitrogen dichloride</u>
i	(NH ₄) ₂ Se	<u>ammonium selenide</u>
i	FeO	<u>iron (II) oxide</u>
i	Fe ₂ O ₃	<u>iron (III) oxide</u>
i	Cr ₂ (SO ₄) ₃	<u>chromium (III) sulfate</u>
i	Hg ₂ I ₂	<u>mercury (II) iodide</u>
i	MgO ₂	<u>magnesium oxide</u>
i	NaClO	<u>sodium hypochlorite</u>
i	Mg(HCO ₃) ₂	<u>magnesium hydrogen carbonate</u>
C	NO ₂	<u>nitrogen dioxide</u>

4. Turn the following names into formulas. Make sure all compounds are neutral.

lead(IV) hydroxide Pb^{4+} OH^-



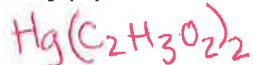
sulfur dioxide



dichlorine monoxide



mercury(II) acetate



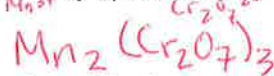
nitrogen tribromide



aluminum nitride



manganese(III) dichromate



ammonium dihydrogen phosphate



dinitrogen tetrafluoride



Tin(II) fluoride



Mercury(I) peroxide



peroxide = O^-

sulfur hexachloride



sodium bromide



Iron(II) chlorate



Gallium sulfide

