

# FORMULAS WITH POLYATOMIC IONS

Name Key

Matching the horizontal and vertical axes, write the formulas of the compounds with the following combination of ions. The first one is done for you.

	$\text{OH}^{-1}$	$\text{NO}_3^{-1}$	$\text{CO}_3^{-2}$	$\text{SO}_4^{-2}$	$\text{PO}_4^{-3}$
$\text{H}^{+1}$	HOH ( $\text{H}_2\text{O}$ )	$\text{HNO}_3$	$\text{H}_2\text{CO}_3$	$\text{H}_2\text{SO}_4$	$\text{H}_3\text{PO}_4$
$\text{Na}^{+1}$	$\text{Na}(\text{OH})$	$\text{Na}(\text{NO}_3)$	$\text{Na}_2(\text{CO}_3)$	$\text{Na}_2(\text{SO}_4)$	$\text{Na}_3(\text{PO}_4)$
$\text{Mg}^{+2}$	$\text{Mg}(\text{OH})_2$	$\text{Mg}(\text{NO}_3)_2$	$\text{Mg}(\text{CO}_3)$	$\text{Mg}(\text{SO}_4)$	$\text{Mg}_3(\text{PO}_4)_2$
$\text{NH}_4^{+1}$	$(\text{NH}_4)\text{OH}$	$(\text{NH}_4)\text{NO}_3$	$(\text{NH}_4)_2\text{CO}_3$	$(\text{NH}_4)_2\text{SO}_4$	$(\text{NH}_4)_3\text{PO}_4$
$\text{Ca}^{+2}$	$\text{Ca}(\text{OH})_2$	$\text{Ca}(\text{NO}_3)_2$	$\text{Ca}(\text{CO}_3)$	$\text{Ca}(\text{SO}_4)$	$\text{Ca}_3(\text{PO}_4)_2$
$\text{K}^{+1}$	$\text{K}(\text{OH})$	$\text{K}(\text{NO}_3)$	$\text{K}_2(\text{CO}_3)$	$\text{K}_2(\text{SO}_4)$	$\text{K}_3(\text{PO}_4)$
$\text{Al}^{+3}$	$\text{Al}(\text{OH})_3$	$\text{Al}(\text{NO}_3)_3$	$\text{Al}_2(\text{CO}_3)_3$	$\text{Al}_2(\text{SO}_4)_3$	$\text{Al}(\text{PO}_4)$
$\text{Pb}^{+4}$	$\text{Pb}(\text{OH})_4$	$\text{Pb}(\text{NO}_3)_4$	$\text{Pb}(\text{CO}_3)_2$	$\text{Pb}(\text{SO}_4)_2$	$\text{Pb}_3(\text{PO}_4)_4$

## NAMING OF NON-BINARY COMPOUNDS

Name \_\_\_\_\_

Key

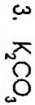
An ionic compound that contains more than two elements must contain a polyatomic ion. Name the following compounds.



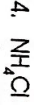
Sodium Nitrate



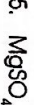
Calcium hydroxide



Potassium carbonate



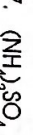
Ammonium chloride



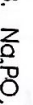
Magnesium sulfate



Aluminum phosphate



Ammonium sulfate



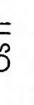
Sodium phosphate



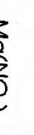
Copper(II) sulfate



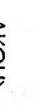
Ammonium hydroxide



Lithium sulfate



Magnesium Nitrate



Aluminum Hydroxide



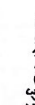
Ammonium phosphate



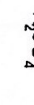
Potassium hydroxide



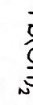
Calcium nitrate



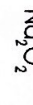
Potassium sulfate



Lead Hydroxide  $\rightarrow$  Lead(II) Hydroxide



Sodium oxide



Copper carbonate  $\rightarrow$  Copper(II) carbonate

## WRITING BINARY FORMULAS

Name \_\_\_\_\_

Key

Write the formulas for the compounds formed from the following ions.

