

# Chemical Names and Formulas



## FORMAT:

The test will consist of six areas: vocabulary, polyatomic ions and metal cations, ionic compounds, molecular compounds, acids, and review of molecular geometry. You must be able to name compounds and write formulas. Many of the questions will require analytical and critical thinking on your part. So think! Study and you will do well.

## VOCABULARY

molecule	chemical formula	molecular formula	empirical formula
subscript	oxidation number	binary acids	molecular compounds
acid	binary compounds	ternary acids	polyatomic ion
aqueous	dissociation		

## KNOW

- the polyatomic ions
- the numerical prefixes
- the metal cations
- simple cations and anions
- the rules for naming binary compounds
- the rules for naming acids

## BE ABLE TO

- determine oxidation state (number)
- name polyatomic ions
- name ionic and molecular compounds
- write formulas for ionic and molecular compounds
- name common acids
- write formulas for common acids

## REVIEW

- chemical bonds and polarity
- element's electron configuration
- the elements and the periodic table
- sig figs
- metrics

**Practice****WRITE** the name for the following polyatomic ions or metal cations.

_____ $C_2H_3O_2^-$	_____ $OH^-$	_____ $Pb_4^+$
_____ $NH_4^+$	_____ $SO_4^{2-}$	_____ $CO_3^{2-}$
_____ $PO_4^{3-}$	_____ $Fe_3^+$	_____ $NO_3^-$

**WRITE** the formula for the following compounds.

_____ tetrasulfur dinitride	_____ silicon disulfide
_____ oxygen difluoride	_____ bismuth trioxide
_____ lead(II) acetate	_____ barium phosphate
_____ copper(I) perchlorate	_____ calcium sulfate
_____ sodium peroxide	_____ silver iodide

**WRITE** the name for the following compounds.

_____ $CCl_4$	_____ $PCl_3$	_____ $As_2S_3$
_____ $HBr$	_____ $SbCl_3$	_____ $CBr_4$
_____ $CrF_3$	_____ $AgBr$	_____ $CaSO_3$
_____ $Mg(OH)_2$	_____ $(NH_4)_2Cr_2O_7$	_____ $KClO_3$

**WRITE** the name for the following acids.

_____ $HNO_3$	_____ $HC_2H_3O_2$	_____ $H_2S$
_____ $HPO_3$	_____ $H_2SO_3$	_____ $HBr$

**WRITE** the oxidation number for each element in the following compounds.

NaCl _____	$Al_2O_3$ _____	$SnF_2$ _____
_____	_____	_____

**“Do all things without complaining and disputing.”**