

Chemistry – Chapter 7: Language of Chemistry

Nomenclature Practice Part 2

Name: _____ KEY _____ Date: _____ Period: _____

Covalent Compounds and Acid Nomenclature:

State how a covalent compound can be identified: **Covalent compounds are formed from nonmetals so there should only be nonmetals in the compound: No metals or polyatomic ions.** _____

Explain how naming of a covalent compound differs from that of an ionic compound: **Since there are no charges to balance, you must use prefixes (di, tri, tetra, etc.) to specify how many atoms of a given element are in the compound.**

State how to identify a simple acid: **A simple acid, whether a binary or oxoacid will have one or more leading hydrogens in the compound.** _____

Name the Covalent Compound From the Given Formula	
Compound	Name
NF ₃	Nitrogen trifluoride
SO ₂	Sulfur dioxide
N ₂ O ₄	Dinitrogen tetraoxide
SF ₆	Sulfur hexafluoride
P ₂ O ₅	Diphosphorus pentoxide
NI ₃	Nitrogen triiodide
Br ₂ O ₃	Dibromine trioxide
P ₂ F ₄	Diphosphorus tetrafluoride
SiO ₂	Silicon dioxide
S ₂ F ₁₀	Disulfur decafluoride
P ₄ O ₁₀	Tetraphosphorus decaoxide
Write the Formula From the Given Name	
Name	Formula
Dinitrogen monoxide	N ₂ O
Bromine heptafluoride	BrF ₇
Tetraphosphorus octasulfide	P ₄ S ₈
Tetraiodine nonoxide	I ₄ O ₉
Carbon monoxide	CO
Oxygen difluoride	OF ₂
Trinitrogen pentoxide	N ₃ O ₅
Pentasulfur hexanitride	S ₅ N ₆

Name the Acid From the Given Formula	
Compound	Name
H_2CrO_4	Chromic acid
H_2SO_3	Sulfurous acid
HI	Hydroiodic acid
H_2CO_3	Carbonic acid
HClO_2	Chlorous acid
H_2S	Hydrosulfuric acid
H_3AsO_4 (AsO_4^{3-} = arsenate)	Arsenic acid
$\text{HC}_2\text{H}_3\text{O}_2$	Acetic acid
HBrO_4 (BrO_4^- = perbromate)	Perbromic acid
HIO (IO^- = hypoiodite)	Hypoiodous acid
H_3PO_4	Phosphoric acid
Write the Formula From the Given Name	
Name	Formula
Sulfurous acid	H_2SO_3
Permanganic acid	HMnO_4
Chlorous acid	HClO_2
Hydrobromic acid	HBr
Nitrous acid	HNO_2
Sulfuric acid	H_2SO_4
Hydrosulfuric acid	H_2S
Dichromic acid	$\text{H}_2\text{Cr}_2\text{O}_7$

Combination Practice: Give the name or formula as appropriate for the following compounds:

Compound	Type (Ionic, Covalent or Acid)	Answer
XeF_4	Covalent	Xenon tetrafluoride
Hypobromous acid	Acid	HBrO
PbSe_2	Ionic	Lead(IV)selenide or plumbic selenide
Tetraarsenic hexoxide	Covalent	As_4O_6
Stannous acetate	Ionic	$\text{Sn}(\text{C}_2\text{H}_3\text{O}_2)_2$
Br_3O_8	covalent	Tribromine octaoxide
HCl	Acid	Hydrochloric acid
Indium phosphide	Ionic	InP