

This is a sample quiz for CH 151 providing nomenclature examples. Answers are provided at the end of this handout. *Good luck!*

Provide names or formulas for the following compounds:

nitrogen trifluoride	nitrogen monoxide	nitrogen dioxide
dinitrogen tetroxide	dinitrogen monoxide	phosphorus trichloride
phosphorus pentachloride	sulfur hexafluoride	disulfur decafluoride
xenon tetrafluoride	$\text{CCl}_4$	$\text{P}_4\text{O}_{10}$
$\text{ClF}_3$	$\text{BCl}_3$	$\text{SF}_4$
$\text{HBr(g)}$	$\text{N}_2\text{F}_2$	$\text{XeF}_3$
$\text{PI}_3$	$\text{SCl}_2$	$\text{S}_2\text{Cl}_2$
$\text{OF}_2$	$\text{NCl}_3$	$\text{AsCl}_5$

This is a sample quiz for CH 151 providing examples of nomenclature. Answers are provided at the end of this handout.

Provide a formula for the following combinations of cation and anion:

	Cl <sup>-</sup>	NO <sub>3</sub> <sup>-</sup>	S <sup>2-</sup>	CO <sub>3</sub> <sup>2-</sup>	N <sup>3-</sup>	PO <sub>4</sub> <sup>3-</sup>	OH <sup>-</sup>
Na <sup>+</sup>							
NH <sub>4</sub> <sup>+</sup>							
Sn <sup>2+</sup>							
Hg <sub>2</sub> <sup>2+</sup>							
Al <sup>3+</sup>							
Sn <sup>4+</sup>							

Provide the formula and name for the following combinations of cations and anions:

Cation	Anion	Formula	Name
Cu <sup>2+</sup>	OH <sup>-</sup>		
Ba <sup>2+</sup>	SO <sub>4</sub> <sup>2-</sup>		
NH <sub>4</sub> <sup>+</sup>	Cr <sub>2</sub> O <sub>7</sub> <sup>2-</sup>		
Ag <sup>+</sup>	C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup>		
Fe <sup>3+</sup>	S <sup>2-</sup>		

Provide names and/or formulas for the following:

Formula	Name
HCl(aq)	
HBrO <sub>2</sub> (aq)	
H <sub>2</sub> SO <sub>4</sub> (aq)	
HNO <sub>2</sub> (aq)	
HIO(aq)	
HIO <sub>4</sub> (aq)	
NaOH	
LiOH	
NH <sub>4</sub> OH	
Mg(OH) <sub>2</sub>	

Formula	Name
	hydrobromic acid
	chlorous acid
	sulfurous acid
	hydrosulfuric acid
	nitric acid
	phosphoric acid
	phosphorous acid
	potassium hydroxide
	calcium hydroxide
	dihydrogen monoxide

CH 151 Nomenclature *Self Quiz* - ANSWERS APPEAR IN BOLD

nitrogen trifluoride <b>NF<sub>3</sub></b>	nitrogen monoxide <b>NO</b>	nitrogen dioxide <b>NO<sub>2</sub></b>
dinitrogen tetroxide <b>N<sub>2</sub>O<sub>4</sub></b>	dinitrogen monoxide <b>N<sub>2</sub>O</b>	phosphorus trichloride <b>PCl<sub>3</sub></b>
phosphorus pentachloride <b>PCl<sub>5</sub></b>	sulfur hexafluoride <b>SF<sub>6</sub></b>	disulfur decafluoride <b>S<sub>2</sub>F<sub>10</sub></b>
xenon tetrafluoride <b>XeF<sub>4</sub></b>	CCl <sub>4</sub> <b>carbon tetrachloride</b>	P <sub>4</sub> O <sub>10</sub> <b>tetraphosphorus decaoxide</b>
ClF <sub>3</sub> <b>chlorine trifluoride</b>	BCl <sub>3</sub> <b>boron trichloride</b>	SF <sub>4</sub> <b>sulfur tetrafluoride</b>
HBr(g) <b>hydrogen monobromide</b> <i>(not an acid)</i>	N <sub>2</sub> F <sub>2</sub> <b>dinitrogen difluoride</b>	XeF <sub>3</sub> <b>xenon trifluoride</b>
PI <sub>3</sub> <b>phosphorus triiodide</b>	SCl <sub>2</sub> <b>sulfur dichloride</b>	S <sub>2</sub> Cl <sub>2</sub> <b>disulfur dichloride</b>
OF <sub>2</sub> <b>oxygen difluoride</b>	NCl <sub>3</sub> <b>nitrogen trichloride</b>	AsCl <sub>5</sub> <b>arsenic pentachloride</b>

CH 151 Nomenclature *Self Quiz* - ANSWERS APPEAR IN BOLD

Provide a formula for the following combinations of cation and anion:

	Cl <sup>-</sup>	NO <sub>3</sub> <sup>-</sup>	S <sup>2-</sup>	CO <sub>3</sub> <sup>2-</sup>	N <sup>3-</sup>	PO <sub>4</sub> <sup>3-</sup>	OH <sup>-</sup>
Na <sup>+</sup>	<b>NaCl</b>	<b>NaNO<sub>3</sub></b>	<b>Na<sub>2</sub>S</b>	<b>Na<sub>2</sub>CO<sub>3</sub></b>	<b>Na<sub>3</sub>N</b>	<b>Na<sub>3</sub>PO<sub>4</sub></b>	<b>NaOH</b>
NH <sub>4</sub> <sup>+</sup>	<b>NH<sub>4</sub>Cl</b>	<b>NH<sub>4</sub>NO<sub>3</sub></b>	<b>(NH<sub>4</sub>)<sub>2</sub>S</b>	<b>(NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub></b>	<b>(NH<sub>4</sub>)<sub>3</sub>N</b>	<b>(NH<sub>4</sub>)<sub>3</sub>PO<sub>4</sub></b>	<b>NH<sub>4</sub>OH</b>
Sn <sup>2+</sup>	<b>SnCl<sub>2</sub></b>	<b>Sn(NO<sub>3</sub>)<sub>2</sub></b>	<b>SnS</b>	<b>SnCO<sub>3</sub></b>	<b>Sn<sub>3</sub>N<sub>2</sub></b>	<b>Sn<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub></b>	<b>Sn(OH)<sub>2</sub></b>
Hg <sub>2</sub> <sup>2+</sup>	<b>Hg<sub>2</sub>Cl<sub>2</sub></b>	<b>Hg<sub>2</sub>(NO<sub>3</sub>)<sub>2</sub></b>	<b>Hg<sub>2</sub>S</b>	<b>Hg<sub>2</sub>CO<sub>3</sub></b>	<b>(Hg<sub>2</sub>)<sub>3</sub>N<sub>2</sub></b>	<b>(Hg<sub>2</sub>)<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub></b>	<b>Hg<sub>2</sub>(OH)<sub>2</sub></b>
Al <sup>3+</sup>	<b>AlCl<sub>3</sub></b>	<b>Al(NO<sub>3</sub>)<sub>3</sub></b>	<b>Al<sub>2</sub>S<sub>3</sub></b>	<b>Al<sub>2</sub>(CO<sub>3</sub>)<sub>3</sub></b>	<b>AlN</b>	<b>AlPO<sub>4</sub></b>	<b>Al(OH)<sub>3</sub></b>
Sn <sup>4+</sup>	<b>SnCl<sub>4</sub></b>	<b>Sn(NO<sub>3</sub>)<sub>4</sub></b>	<b>SnS<sub>2</sub></b>	<b>Sn(CO<sub>3</sub>)<sub>2</sub></b>	<b>Sn<sub>3</sub>N<sub>4</sub></b>	<b>Sn<sub>3</sub>(PO<sub>4</sub>)<sub>4</sub></b>	<b>Sn(OH)<sub>4</sub></b>

Provide the formula and name for the following combinations of cations and anions:

Cation	Anion	Formula	Name
Cu <sup>2+</sup>	OH <sup>-</sup>	<b>Cu(OH)<sub>2</sub></b>	<b>copper(II) hydroxide</b>
Ba <sup>2+</sup>	SO <sub>4</sub> <sup>2-</sup>	<b>BaSO<sub>4</sub></b>	<b>barium sulfate</b>
NH <sub>4</sub> <sup>+</sup>	Cr <sub>2</sub> O <sub>7</sub> <sup>2-</sup>	<b>(NH<sub>4</sub>)<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub></b>	<b>ammonium dichromate</b>
Ag <sup>+</sup>	C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> <sup>-</sup>	<b>AgC<sub>2</sub>H<sub>3</sub>O<sub>2</sub></b>	<b>silver(I) acetate</b>
Fe <sup>3+</sup>	S <sup>2-</sup>	<b>Fe<sub>2</sub>S<sub>3</sub></b>	<b>iron(III) sulfide</b>

Provide names and/or formulas for the following:

Formula	Name
HCl(aq)	<b>hydrochloric acid</b>
HBrO <sub>2</sub> (aq)	<b>bromous acid</b>
H <sub>2</sub> SO <sub>4</sub> (aq)	<b>sulfuric acid</b>
HNO <sub>2</sub> (aq)	<b>nitrous acid</b>
HIO(aq)	<b>hypoiodous acid</b>
HIO <sub>4</sub> (aq)	<b>periodic acid</b>
NaOH	<b>sodium hydroxide</b>
LiOH	<b>lithium hydroxide</b>
NH <sub>4</sub> OH	<b>ammonium hydroxide</b>
Mg(OH) <sub>2</sub>	<b>magnesium hydroxide</b>

Formula	Name
<b>HBr(aq)</b>	hydrobromic acid
<b>HClO<sub>2</sub>(aq)</b>	chlorous acid
<b>H<sub>2</sub>SO<sub>3</sub>(aq)</b>	sulfurous acid
<b>H<sub>2</sub>S(aq)</b>	hydrosulfuric acid
<b>HNO<sub>3</sub>(aq)</b>	nitric acid
<b>H<sub>3</sub>PO<sub>4</sub>(aq)</b>	phosphoric acid
<b>H<sub>3</sub>PO<sub>3</sub>(aq)</b>	phosphorous acid
<b>KOH</b>	potassium hydroxide
<b>Ca(OH)<sub>2</sub></b>	calcium hydroxide
<b>H<sub>2</sub>O</b>	dihydrogen monoxide