

Ionic & Covalent Compounds Worksheet

Write formulas for the following compounds and classify as ionic (I) or covalent (C):

lithium chloride	_____	I or C
ammonium permanganate	_____	_____
silver nitrate	_____	_____
zinc hydroxide	_____	_____
carbon disulfide	_____	_____
iron(III) phosphate	_____	_____
copper(I) iodide	_____	_____
tin(IV) fluoride	_____	_____
barium dichromate	_____	_____
beryllium nitrite	_____	_____
sulfur trioxide	_____	_____
calcium bromide	_____	_____
lead(IV) carbonate	_____	_____
carbon tetrafluoride	_____	_____
strontium sulfide	_____	_____
aluminum acetate	_____	_____
sodium bicarbonate	_____	_____
tin(II) iodide	_____	_____
boron trichloride	_____	_____
dibromine pentoxide	_____	_____
ammonia	_____	_____
silicon dioxide	_____	_____
tetrasulfur tetranitride	_____	_____
magnesium phosphide	_____	_____
copper(I) bisulfite	_____	_____

Write names for the following compounds and classify as ionic (I) or covalent (C):

NaClO ₄	_____	<u>I or C</u>
P ₂ O ₃	_____	_____
Li ₃ P	_____	_____
KHSO ₄	_____	_____
FeS	_____	_____
PbCrO ₄	_____	_____
MgBr ₂	_____	_____
ZnSO ₄	_____	_____
K ₂ CO ₃	_____	_____
Cl ₂ S ₅	_____	_____
H ₂ O	_____	_____
Al ₂ O ₃	_____	_____
NF ₃	_____	_____
CO ₂	_____	_____
NH ₄ NO ₂	_____	_____
Cu(NO ₃) ₂	_____	_____
Ca ₃ N ₂	_____	_____
AlPO ₄	_____	_____
Na ₂ SO ₃	_____	_____
CCl ₄	_____	_____
KCN	_____	_____
HCl	_____	<u>strong acid⇒I</u>
CH ₄	_____	_____
Ba(OH) ₂	_____	_____
H ₂ S	_____	_____
LiC ₂ H ₃ O ₂	_____	_____

lithium chloride	<u>LiCl</u>	<u>I</u>
ammonium permanganate	<u>NH₄MnO₄</u>	<u>I</u>
silver nitrate	<u>AgNO₃</u>	<u>I</u>
zinc hydroxide	<u>Zn(OH)₂</u>	<u>I</u>
carbon disulfide	<u>CS₂</u>	<u>C</u>
iron(III) phosphate	<u>FePO₄</u> (also called ferric phosphate)	<u>I</u>
copper(I) iodide	<u>CuI</u> (also called cuprous iodide)	<u>I</u>
tin(IV) fluoride	<u>SnF₄</u> (also called stannic fluoride)	<u>I</u>
barium dichromate	<u>BaCr₂O₇</u>	<u>I</u>
beryllium nitrite	<u>Be(NO₂)₂</u>	<u>I</u>
sulfur trioxide	<u>SO₃</u>	<u>C</u>
calcium bromide	<u>CaBr₂</u>	<u>I</u>
lead(IV) carbonate	<u>Pb(CO₃)₂</u> (also called plumbic carbonate)	<u>I</u>
carbon tetrafluoride	<u>CF₄</u>	<u>C</u>
strontium sulfide	<u>SrS</u>	<u>I</u>
aluminum acetate	<u>Al(C₂H₃O₂)₃</u>	<u>I</u>
sodium bicarbonate	<u>NaHCO₃</u>	<u>I</u>
tin(II) iodide	<u>SnI₂</u> (also called stannous iodide)	<u>I</u>
boron trichloride	<u>BCl₃</u>	<u>C</u>
dibromine pentoxide	<u>Br₂O₅</u>	<u>C</u>
ammonia	<u>NH₃</u>	<u>C</u>
silicon dioxide	<u>SiO₂</u>	<u>C</u>
tetrasulfur tetranitride	<u>S₄N₄</u>	<u>C</u>
magnesium phosphide	<u>Mg₃P₂</u>	<u>I</u>
copper(I) bisulfite	<u>CuHSO₃</u> (also called cuprous bisulfate)	<u>I</u>

NaClO_4	sodium perchlorate	I
P_2O_3	diphosphorus trioxide	C
Li_3P	lithium phosphide	I
KHSO_4	potassium bisulfate	I
FeS	iron(II) sulfide or ferrous sulfide	I
PbCrO_4	lead(II) chromate or plumbous chromate	I
MgBr_2	magnesium bromide	I
ZnSO_4	zinc sulfate	I
K_2CO_3	potassium carbonate	I
Cl_2S_5	dichlorine pentasulfide	C
H_2O	water	C
Al_2O_3	aluminum oxide	I
NF_3	nitrogen trifluoride	C
CO_2	carbon dioxide	C
NH_4NO_2	ammonium nitrite	I
$\text{Cu}(\text{NO}_3)_2$	copper(II) nitrate or cupric nitrate	I
Ca_3N_2	calcium nitride	I
AlPO_4	aluminum phosphate	I
Na_2SO_3	sodium sulfite	I
CCl_4	carbon tetrachloride	C
KCN	potassium cyanide	I
HCl	hydrogen chloride or hydrochloric acid if (aq)	strong acid \Rightarrow I
CH_4	methane	C
$\text{Ba}(\text{OH})_2$	barium hydroxide	I
H_2S	(di)hydrogen sulfide	C
$\text{LiC}_2\text{H}_3\text{O}_2$	lithium acetate	I