

Predicting and Naming Polyatomic Ionic Compounds Worksheet

Name _____

You are required to know numbers of atoms and charge on the following polyatomic ions:

Name of the ion	Chemical structure	Name of the ion	Chemical structure
Phosphate ion	PO_4^{3-}	Sulfate ion	SO_4^{2-}
Hydrogen phosphate ion	HPO_4^{2-}	Hydrogen sulfate ion	HSO_4^-
Dihydrogen phosphate ion	H_2PO_4^-	Nitrate ion	NO_3^-
Carbonate ion	CO_3^{2-}	Acetate ion	$\text{C}_2\text{H}_3\text{O}_2^-$
Hydrogen carbonate ion	HCO_3^-	Hydroxide ion	OH^-
		Ammonium ion	NH_4^+

Given the following **polyatomic** ionic compounds, fill in the formula of the compound from its name.

Name of Compound	Element or Polyatomic Cation	Element or Polyatomic Anion	Compound Formula
Lithium Nitrate			
Sodium Sulfate			
Potassium Phosphate			
Lithium Carbonate			
Sodium Acetate			
Potassium Hydroxide			

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Name of Compound	Element or Polyatomic Cation	Element or Polyatomic Anion	Compound Formula
Ammonium Fluoride			
Beryllium Nitrate			
Magnesium Sulfate			
Calcium Phosphate			
Strontium Carbonate			
Barium Acetate			
Magnesium Hydroxide			
Ammonium Sulfide			
Aluminum Nitrate			
Aluminum Phosphate			

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Name of Compound	Element or Polyatomic Cation	Element or Polyatomic Anion	Compound Formula
Aluminum Carbonate			
Aluminum Acetate			
Aluminum Hydroxide			

Given the following **polyatomic** ionic compounds, fill in the name of the compound from its formula.

Compound Formula	Compound Name
BaCO ₃	
Sr(C ₂ H ₃ O ₂) ₂	
NaOH	
NH ₄ Cl	
Fe(NO ₃) ₃	
CdSO ₄	
Ca ₃ (PO ₄) ₂	
Ag ₂ CO ₃	
KC ₂ H ₃ O ₂	
Fe(OH) ₂	

