

Name _____ Period _____

CP Chemistry of the Earth

Assignment 2P – Polyatomic Ion Compounds (Part 2)

30 Points

Complete the following chart using the in class polyatomic ion chart, including name and charge

Poly Ion	Ion Name	Charge	Poly Ion	Ion Name	Charge
SCN ¹⁻			C ₂ O ₄ ²⁻		
<u>HCO₃¹⁻</u>	<u>Bicarbonate Ion</u>	<u>-1</u>	S ₂ O ₃ ²⁻		
MnO ₄ ¹⁻			HPO ₄ ²⁻	<u>Hydrogen Phosphate Ion</u>	<u>-2</u>
FO ₃ ¹⁻			Cr ₂ O ₇ ²⁻		

Complete the following ionic compounds based on the chart below using the cross method.

Elements	<u>A</u> K ⁺	<u>B</u> HPO ₄ ²⁻
Ion Charge	<u>+1</u>	<u>-2</u>
Cross Method	$\begin{array}{c} +1 \quad -2 \\ \text{K} \quad (\text{HPO}_4) \\ \text{K}_2(\text{HPO}_4)_1 \end{array}$	
Ionic Formula	<u>K₂HPO₄</u>	

Elements	Al	C ₂ O ₄ ²⁻
Ion Charge		
Cross Method	$\begin{array}{c} 1 = \text{no} \\ 1 \text{ "HPO}_4\text{"} \end{array}$	
Ionic Formula		

Elements	Sn ⁴⁺	MnO ₄ ¹⁻
Ion Charge		
Cross Method		
Ionic Formula		

Elements	Ca	CO ₃ ²⁻
Ion Charge		
Cross Method		
Ionic Formula		

Elements	<u>A</u> Cd ²⁺	<u>B</u> PO ₄ ³⁻
Ion Charge	<u>+2</u>	<u>-3</u>
Cross Method	$\begin{array}{c} +2 \quad -3 \\ \text{Cd} \quad (\text{PO}_4) \\ \text{Cd}_3(\text{PO}_4)_2 \end{array}$	
Ionic Formula	<u>Cd₃(PO₄)₂</u>	

Elements	Pb ⁴⁺	SO ₄ ²⁻
Ion Charge		
Cross Method	$\begin{array}{c} \text{Reduce} \\ \text{Cd}_3(\text{PO}_4)_3 \\ \text{Cd}_1(\text{PO}_4)_1 \end{array}$	
Ionic Formula		

1 = no

Elements	W^{6+}	$\text{Cr}_2\text{O}_7^{2-}$		Be	HPO_4^{2-}		Si	$\text{S}_2\text{O}_3^{2-}$
Ion Charge								
Cross Method								
Ionic Formula								