

Name _____ Period _____

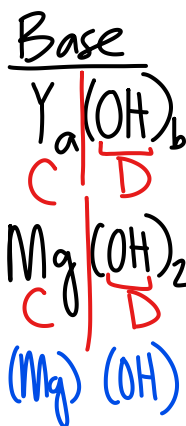
College Prep Chemistry of the Earth

Assignment 4L – Writing Binary Acid Base Double Replacement Reactions

20 Points

For the following reactions, write the products of each reaction following the template provided.

Show work for ionic compound



Reaction: $HF + Mg(OH)_2 \rightarrow \text{ } + \text{ }$

AB + CD → AD + CB

	A	D	C	B
Element or Ion	H	OH	Mg	F
Ion Charge	(1) +1	(poly) -1	(2) +2	(1) -1
Cross Method	H OH		Mg F	
Final Formula	HOH		MgF ₂	
	→ (left side)		(right side)	

Reaction: $H_2O + Al(OH)_3 \rightarrow \text{ } + \text{ }$

AB + CD → AD + CB

	A	D	C	B
Element or Ion				
Ion Charge				
Cross Method				
Final Formula				

Reaction: $H_2S + LiOH \rightarrow \text{ } + \text{ }$

AB + CD → AD + CB

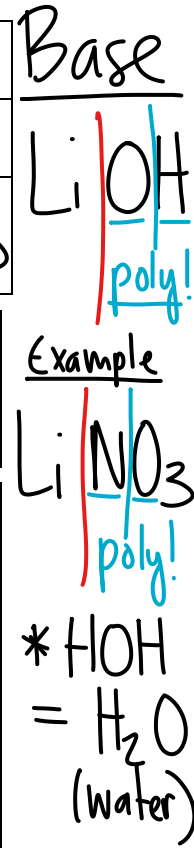
	A	D	C	B
Element or Ion	H	OH	Li	S
Ion Charge	+1	-1	(1) +1	(1b) -2
Cross Method	H OH		Li S	
Final Formula	HOH		Li ₂ S	

Reaction: $H_3P + Sn(OH)_4 \rightarrow \text{ } + \text{ }$

$Sn = +4$

AB + CD → AD + CB

	A	D	C	B
Element or Ion				
Ion Charge				
Cross Method				
Final Formula				



min. work!

Final Formula!

Reaction		$\text{HBr} + \text{Ni}(\text{OH})_2 \rightarrow \text{---} + \text{---}$ $\text{Ni} = +2$					
AB		+	CD	$\rightarrow$	AD	+	CB
		+		$\rightarrow$		+	

	A	D	C	B
Element or Ion				

Ion Charge				
Cross Method Final Formula				

Reaction		$\text{H}_3\text{N} + \text{W}(\text{OH})_6 \rightarrow _ + _$ $\text{W} = +6$							
AB		+	CD		$\rightarrow$	AD	+	CB	
		+			$\rightarrow$			+	

	A	D	C	B
Element or Ion				

Ion Charge				
Cross Method Final Formula				

Reaction		$\text{HCl} + \text{Mn}(\text{OH})_3 \rightarrow \text{---} + \text{---}$ $\text{Mn} = +3$								
AB		+	CD		$\rightarrow$	AD		+	CB	
		+			$\rightarrow$			+		

	A	D	C	B
Element or Ion				

Ion Charge				
Cross Method Final Formula				

Reaction		$\text{HI} + \text{Cd}(\text{OH})_2 \rightarrow _ + _$ $\text{Cd} = +2$					
AB		+	CD	$\rightarrow$	AD	+	CB
		+		$\rightarrow$		+	

	A	D	C	B
Element or Ion				

Ion Charge				
Cross Method Final Formula				