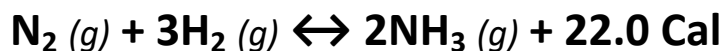


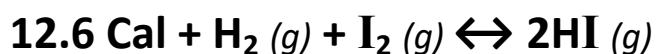
Le Châtelier's Principle Worksheet

Le Chatelier's Principle states that when a system at equilibrium is subjected to a stress, the system will shift its equilibrium point in order to relieve the stress.

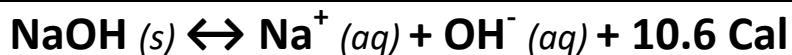
Complete the following chart by writing left, right or none for the equilibrium shift, and decreases, increases or remains the same for the concentrations of reactants and products.



	Change	Equilibrium Shift	[N₂]	[H₂]	[NH₃]
(1)	Add N₂	<i>right</i>	 	<i>decreases</i>	<i>increases</i>
(2)	Add H₂			 	
(3)	Add NH₃				
(4)	Remove N₂		 		
(5)	Remove H₂			 	
(6)	Remove NH₃				
(7)	Increase Temperature				
(8)	Decrease Temperature				
(9)	Increase Pressure				
(10)	Decrease Pressure				



	Change	Equilibrium	[H ₂]	[I ₂]	[HI]
(1)	Add H ₂	<i>right</i>	increases	<i>decreases</i>	<i>increases</i>
(2)	Add I ₂		increases	decreases	
(3)	Add HI				increases
(4)	Remove H ₂		decreases		
(5)	Remove I ₂			decreases	
(6)	Remove HI				decreases
(7)	Increase Temperature				
(8)	Decrease Temperature				
(9)	Increase Pressure				
(10)	Decrease Pressure				



	Change	Equilibrium Shift	Amount NaOH (s)	[Na ⁺]	[OH ⁻]
(1)	Add NaOH (s)	<i>right</i>	increases	<i>increases</i>	<i>increases</i>
(2)	Add Na ⁺			increases	
(3)	Add OH ⁻				increases
(4)	Remove OH ⁻				decreases
(5)	Increase Temperature				
(6)	Decrease Temperature				
(7)	Increase Pressure				
(8)	Decrease Pressure				