

Le Chatelier's Principle

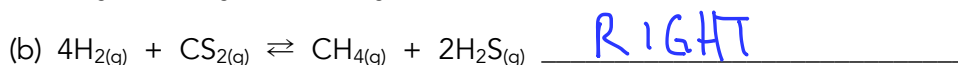
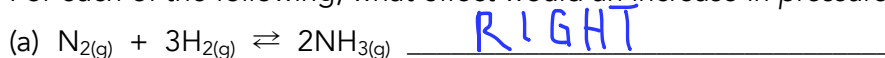
Homework Unit 9 - Topic 6

Stresses & Shifts

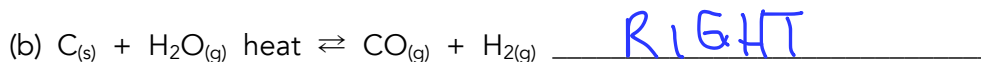
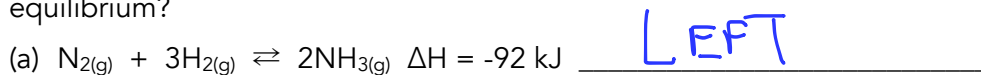
Endo



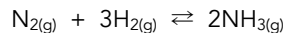
Stress	Equilibrium Shift	[H ₂]	[I ₂]	[HI]
Add H ₂	right	_____	decreases	increases
Add I ₂	R	↓	_____	↑
Add HI	L	↑	↑	_____
Remove H ₂	L	_____	↑	↓
Remove I ₂	L	↑	_____	↓
Remove HI	R	↓	↓	_____
Increase Temperature	R	↓	↓	↑
Decrease Temperature	L	↑	↑	↓
Increase Pressure	—	—	—	—
Decrease Pressure	—	—	—	—

Answer the questions below based on your knowledge of chemistry.1. For each of the following, what effect would an increase in *pressure* have on equilibrium?

2. For each of the following, what effect would an increase in temperature have on equilibrium?

**Regents Practice Problems**

3. Given the reaction at equilibrium:



If the pressure is increase at a constant temperature, there will be an increase in the number of moles of

- (1) NH₃, only
- (2) N₂, only
- (3) H₂, only
- (4) both N₂ and H₂

4. An increase in the temperature of a system at equilibrium favors the

- (1) endothermic reaction and decreases its rate
- (2) endothermic reaction and increases its rate
- (3) exothermic reaction and decreases its rate
- (4) exothermic reaction and increases its rate