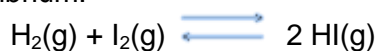


Equilibrium Worksheet

1. For the following reactions at equilibrium:



- 1) Predict the shift in equilibrium when more HI(g) is added to the system.
- 2) How will the concentration of I₂ change?

2. For the reaction below, predict the direction the equilibrium will shift given the following changes. Temperature and volume are held constant.



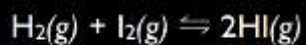
1. Addition of ammonia (NH₃)
2. Removal of nitrogen dioxide (NO₂)
3. Removal of water vapour
4. Addition of hydrogen



Predict the direction of equilibrium shift for:

- a. Increase [Ag⁺]
- b. Decrease [Ag⁺]
- c. Increase [Cl⁻]
- d. Decrease [Cl⁻]
- e. Add solid AgNO₃
- f. Add solid NaNO₃

4. Find the Q value for the initial reaction and the K value for the reaction at equilibrium.



	H ₂	I ₂	HI
Initial (M)	1.00	1.00	0
Change (M)	-0.666	-0.666	1.33
Equilibrium (M)	0.334	0.334	1.33