Questions 1-4 are based upon the following reaction:

 $2 A (g) + 1 B (g) \rightleftharpoons 2 C (g) \quad \Delta H = + (endothermic)$

According to LeChatlier's Principle, will the reaction shift to the left or right (reactants or products) if the following is done to a system at equilibrium.

- Increasing temperature

 (A) Shift toward the left (reactants)
 (B) Shift toward the right (products)
 (C) No shift
- 2) Increase in pressure(A) Shift toward the left (reactants)(B) Shift toward the right (products)(C) No shift
- 3) Increase moles of A(A) Shift toward the left (reactants)(B) Shift toward the right (products)(C) No shift
- 4) Add a catalyst(A) Shift toward the left (reactants)(B) Shift toward the right (products)(C) No shift

 $H_2(g) + I_2(g) \rightleftharpoons 2 HI(g)$

Kp = 50.5

- 5) If 1 atm of H₂ (g), I₂ (g), and HI (g) are placed in a sealed flask at a constant temperature, what will occur?
 - (A) The pressure of HI will increase
 - (B) The pressures of H_2 and I_2 will increase
 - (C) The pressures will stay constant