Name _____ Period _____

Equilibrium Constant Practice

Write the equilibrium constant expression for the following reactions:

1. $2NO_2(g) \leftrightarrows N_2O_4(g)$ K=

2. $aA(g) \leftrightarrows bB(g)$ K=

3. $H_2(g) + I_2(g) \leftrightarrows 2HI(g)$ K=

4. $SO_3(g) + H_2(g) \leftrightarrows SO_2(g) + H_2O(g)$ K=

5. $PCl_5(g) \leftrightarrows PCl_3(g) + Cl_2(g)$ K=

6. $H_2(g) + Cl_2(g) \leftrightarrows 2HCl(g)$ K=

7. $2CO(g) + O_2(g) \leftrightarrows 2CO_2(g)$ K=

8. $2SO_2(g) + O_2(g) + 2H_2O(g) \leftrightarrows 2H_2SO_4(g)$ K=

9. $H_2O(l) \leftrightarrows H^+(aq) + OH^-(aq)$ K=

10. $6CO_2(g) + 6H_2O(l) \leftrightarrows C_6H_{12}O_6(s) + 6O_2(g)$ K=

Calculate the equilibrium constants for the following reactions:

$2NO_2(g) \leftrightarrows N_2O_4(g)$ K=

Experiment	$[NO_2]$	$[N_2O_4]$
1.	0.052	0.595
2.	0.024	0.127
3.	0.068	1.02

Show work here Show answers here

K_1= =

K_2= =

K_3= =

$N_2(g) + 3H_2(g) \leftrightarrows 2NH_3(g)$ K=

Experiment	$[N_2]$	$[H_2]$	$[NH_3]$
1.	0.921	0.763	0.157
2.	0.399	1.177	0.203
3.	2.59	2.77	1.82

Show work here Show answers here

K_1= =

K_2= =

K_3= =