HONORS CHEMISTRY
HOMEWORK 10c. Name: _____

WRITE AN EXPRESSION for each EQUILIBRIUM. **Use square brackets properly!**
Remember to <u>include</u> gases (*g*) and aqueous (*aq*) materials and <u>omit</u> liquids (*l*) and pure solids (*s*).

1. $Mg\ (s) + 2\ HCl\ (aq) \rightleftharpoons MgCl_2\ (aq) + H_2\ (g)$ $K_{eq} =$

2. $2\ H_2O_2\ (l) \rightleftharpoons 2\ H_2O\ (l) + O_2\ (g)$ $K_{eq} =$

3. $SO_3^{2-}\ (aq) + 2\ Fe^{3+}\ (aq) + H_2O\ (l) \rightleftharpoons SO_4^{2-}\ (aq) + 2\ Fe^{2+}\ (aq) + 2H^+\ (aq)$
$K_{eq} =$

4. $2\ Cu\ (s) + O_2\ (g) \rightleftharpoons 2\ CuO\ (s)$ $K_{eq} =$

5. $NH_3\ (g) + BF_3\ (g) \rightleftharpoons NH_3BF_3\ (g)$ $K_{eq} =$

6. $Ba(NO_3)_2\ (aq) + H_2SO_4\ (aq) \rightleftharpoons 2\ HNO_3\ (aq) + BaSO_4\ (s)$
$K_{eq} =$

7. $Mg(OH)_2\ (aq) + 2\ HNO_3\ (aq) \rightleftharpoons Mg(NO_3)_2\ (aq) + 2\ H_2O\ (l)$
$K_{eq} =$

8. $Cl_2\ (g) + 2\ KI\ (aq) \rightleftharpoons 2\ KCl\ (aq) + I_2\ (aq)$ $K_{eq} =$

9. $NaHCO_3\ (aq) + HC_2H_3O_2\ (aq) \rightleftharpoons Na^+\ (aq) + C_2H_3O_2^-\ (aq) + H_2O\ (l) + CO_2\ (g)$
$K_{eq} =$

10. $(NH_4)_2S\ (aq) + 2\ HCl\ (aq) \rightleftharpoons 2\ NH_4Cl\ (aq) + H_2S\ (g)$ $K_{eq} =$

11. $CH_4\ (g) + 3\ Cl_2\ (g) \rightleftharpoons CHCl_3\ (g) + 3\ HCl\ (g)$ $K_{eq} =$