Name _____ Period _____

Redox Homework #2
Balancing Equations in Acidic Solution

Balance the following oxidation–reduction reactions that occur in acidic solution using the half reaction method.

1) $Zn(s) + H^{+}(aq) \leftrightarrows Zn^{2+}(aq) + H_2(g)$

2) $I^{-}(aq) + ClO^{-}(aq) \leftrightarrows I_3^{-}(aq) + Cl^{-}(aq)$

3) $Cr_2O_7^{2-}(aq) + Cl^{-}(aq) \leftrightarrows Cr^{3+}(aq) + Cl_2(g)$

4) $CH_3OH(aq) + Cr_2O_7^{2-}(aq) \leftrightarrows CH_2O(aq) + Cr^{3+}(aq)$

5) $H_3AsO_4(aq) + Zn(s) \leftrightarrows AsH_3(g) + Zn^{2+}(aq)$

6) $Cu(s) + HNO_3(aq) \leftrightarrows Cu^{2+}(aq) + NO(g)$

7) $Br^-(aq) + MnO_4^-(aq) \leftrightarrows Br_2(l) + Mn^{2+}(aq)$

8) $Mn^{2+}(aq) + BiO_3(s) \leftrightarrows Bi^{3+}(aq) + MnO_4^-(aq)$

9) $As_2O_3(s) + NO_3^-(aq) \leftrightarrows H_3AsO_4(aq) + NO(g)$