Name:		
Period:	 Subject:	
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Balancing Redox Reactions

1. In the following reactions identify the oxidizing agent (oxidant), reducing agent (reductant), what is being reduced, what is being oxidized, and balance the equation.

a.
$$Cl_2(g) + Al(s) \rightarrow Al^{3+}(aq) + Cl^{-}(aq)$$

b. Titanium tetrachloride plus magnesium forms magnesium chloride and titanium metal.

c.
$$Co^{3+}(aq) + Ni(s) \rightarrow Ni^{2+}(aq) + Co(s)$$

2. Complete and balance the following reactions:

a.
$$Cr_2O_7^{2-}(aq) + I^{-}(aq) - Cr^{3+}(aq) + IO_3^{-}(aq)$$
 (acidic solution)

2. (cont.) Complete and balance the following reactions:

b.
$$I_2(s) + OCl^{-}(aq) \rightarrow IO_3^{-}(aq) + Cl^{-}(aq)$$
 (acidic solution)

c.
$$MnO_4(aq) + Br(aq) \rightarrow MnO_2(s) + BrO_3(aq)$$
 (basic solution)

d.
$$NO_2^-(aq) + Al(s) \rightarrow NH_4^+(aq) + AlO_2^-(aq)$$
 (basic solution)