Name				

AP Chemistry

Redox Balancing

1.
$$....Mg(s) +NO_3^{-}(aq) +H^{+}(aq) \rightarrowMg^{2+}(aq) +NH_4^{+}(aq) +H_2O(l)$$

When the skeleton equation above is balanced and all coefficients reduced to their lowest whole-number terms. what is the coefficient for H⁺?

2.
$$I^- + MnO_4^- + H_2O(1) \rightarrow I_2(s) + MnO_2(s) + OH^-$$

When the skeleton equation above is balanced and all coefficients reduced to their lowest whole-number terms, what is the coefficient for I ?

3.
$$Cr_2O_7^{2-} + \underline{\hspace{0.2cm}} e^- + \underline{\hspace{0.2cm}} H^+ \rightarrow \underline{\hspace{0.2cm}} Cr^{3+} + \underline{\hspace{0.2cm}} H_2O(1)$$

When the equation for the half reaction above is balanced with the lowest whole-number coefficients, the coefficient for H₂O is:

4.
$$Mg(s) +NO_3^-(aq) +H^+(aq) \rightarrowMg^{2+}(aq) +NH_4^+(aq) +H_2O(1)$$

When the skeleton equation above is balanced and all coefficients reduced to their lowest whole-number terms. what is the coefficient for H⁺?

5.
$$I^- + MnO_4^- + H_2O(1) \rightarrow I_2(s) + MnO_2(s) + OH^-$$

When the skeleton equation above is balanced and all coefficients reduced to their lowest whole-number terms. what is the coefficient for MnO₄⁻?

6.
$$Cr_2O_7^{2-} + e^- + H^+ \rightarrow Cr^{3+} + H_2O(1)$$

6. $\underline{}$ $Cr_2O_7^{2-} + \underline{}$ $e^- + \underline{}$ $H^+ \rightarrow \underline{}$ $Cr^{3+} + \underline{}$ $H_2O(l)$ When the equation for the half reaction above is balanced with the lowest whole-number coefficients, the coefficient for $Cr_2O_7^{2-}$ is:

7.
$$H_2Se(g) + 4 O_2F_2(g) \rightarrow SeF_6(g) + 2 HF(g) + 4 O_2(g)$$

Which of the above is the reducing agent?

8.
$$H_2Se(g) + 4 O_2F_2(g) \rightarrow SeF_6(g) + 2 HF(g) + 4 O_2(g)$$

Which of the above is the oxidizing agent?

9.
$$I^- + MnO_4^- + H_2O(1) \rightarrow I_2(s) + MnO_2(s) + OH^-$$

Which of the above is the oxidizing agent?

10.
$$I^- + MnO_4^- + H_2O(1) \rightarrow I_2(s) + MnO_2(s) + OH^-$$

Which of the above is the reducing agent?

11.
$$2 \text{ H}_2\text{O} + 4 \text{ MnO}_4^- + 3 \text{ ClO}_2^- \rightarrow 4 \text{ MnO}_2 + 3 \text{ ClO}_4^- + 4 \text{ OH}^-$$

Which of the above is the reducing agent?

12.
$$2 H_2O + 4 MnO_4^- + 3 ClO_2^- \rightarrow 4 MnO_2 + 3 ClO_4^- + 4 OH^-$$

Which of the above is the oxidizing agent?