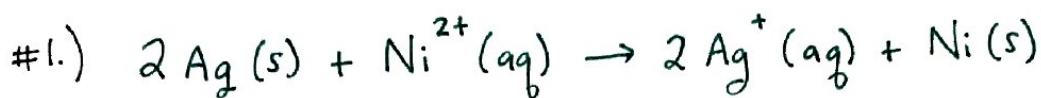
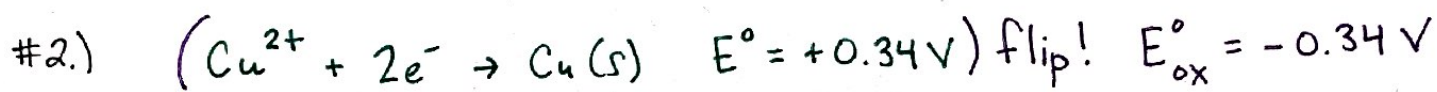


AP Unit 3 Day 4 Practice

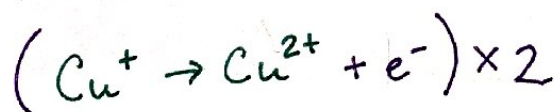
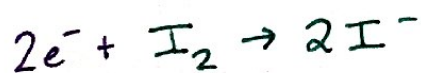
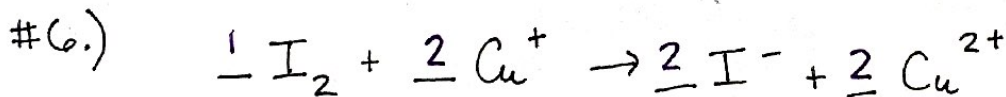


$\downarrow [\text{AgNO}_3] = \downarrow [\text{Ag}^+] = \downarrow [\text{products}] \Rightarrow Q < 1$ (further from equil.)
 $\Rightarrow \uparrow$ voltage

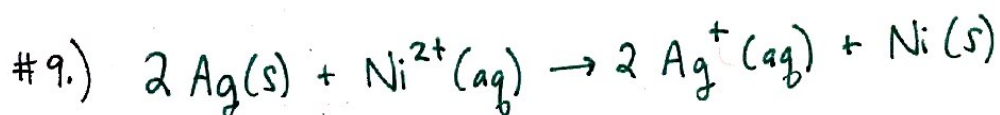


$E^\circ_{\text{cell}} = E^\circ_{\text{ox}} + E^\circ_{\text{red}} = -0.34 + 0.80 = \boxed{0.46 \text{V}}$

#3.) $\Delta G = -nFE_{\text{cell}} = -\left(\frac{6 \text{ mol } e^-}{\text{mol rxn}}\right) \left(96,485 \frac{\text{C}}{\text{mol } e^-}\right) (1.08 \text{V})$
 $= -625,000 \frac{\text{J}}{\text{mol rxn}} \times \frac{1 \text{ kJ}}{1,000 \text{ J}} = \boxed{-625 \frac{\text{kJ}}{\text{mol rxn}}}$



#7.) $E^\circ_{\text{cell}} = -2.54 \text{V} \Rightarrow$ NOT therm. favorable
 $\Rightarrow +\Delta G, K < 1$



$\downarrow [\text{Ni}(\text{ClO}_3)_2] = \downarrow [\text{Ni}^{2+}] = \downarrow [\text{reactants}] \Rightarrow Q > 1$ (closer to equilibrium)

$\Rightarrow \downarrow$ voltage

