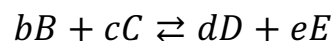


$$\Delta G_r^0 = -nFE_h^0$$

Note the direction that these equations are written in:

Reactants  $\rightleftharpoons$  Products



Oxidized  $\rightleftharpoons$  Reduced

$$E_h = E_h^0 - \frac{RT}{nF} \ln \frac{(D)^d (E)^e}{(B)^b (C)^c}$$

At 25C, with  $R = 8.314 \text{ J mol}^{-1} \text{ deg}^{-1}$ :

$$E_h = E_h^0 - \frac{0.0592}{n} \log_{10} \frac{(D)^d (E)^e}{(B)^b (C)^c}$$

$$E_h^0 = \frac{0.592}{n} \log_{10} K$$

$$\frac{E_h^0 F}{2.3RT} = -\log_{10}(e^-) = pE^0$$

$$pE = pE^0 - \frac{1}{n} \log_{10} \frac{(D)^d (E)^e}{(B)^b (C)^c}$$

Read Emerson and Hedges, 3.5 to help put these equations in context and where they come from