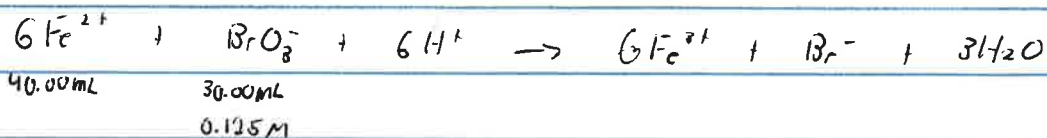


Today: Finish ch 18, start ch 19
 Tuesday: Office hours 8-3, problem club with Ali
 Wednesday: chapter 19

Review:



$$n = (0.125\text{M})(.03\text{L})$$

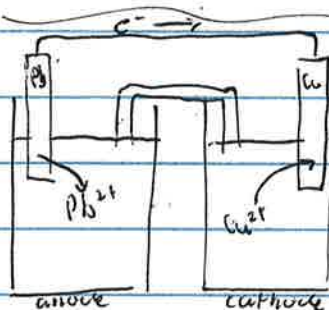
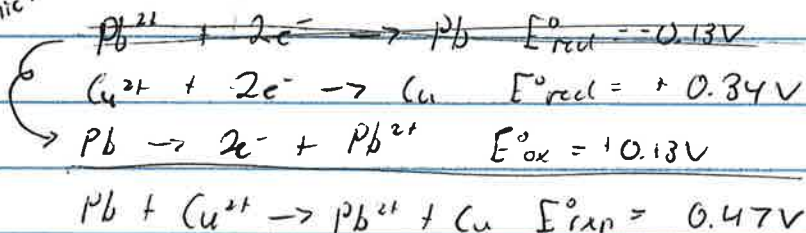
$$n = 3.75 \times 10^{-3} \text{mol}$$

$$\frac{3.75 \times 10^{-3} \text{mol BrO}_3^-}{1 \text{mol BrO}_3^-} \Big/ \frac{6 \text{mol Fe}^{2+}}{1 \text{mol BrO}_3^-} = 2.25 \times 10^{-2} \text{mol Fe}^{2+}$$

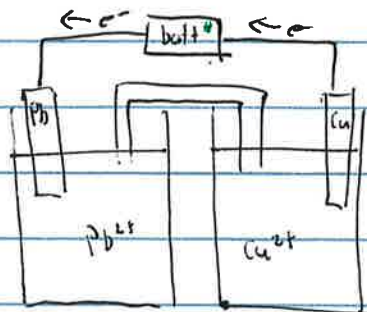
$$2.25 \times 10^{-2} \text{mol} = (.04\text{L})(\text{M})$$

$$\boxed{\text{M} = 0.5625 \text{M} = [\text{Fe}^{2+}]}$$

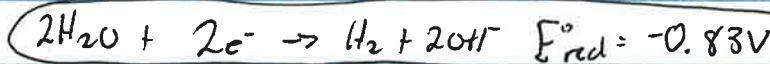
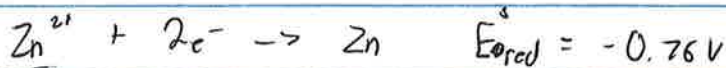
Galvanic:



Electrolytic reaction: $\Delta G > 0$, $E < 0$

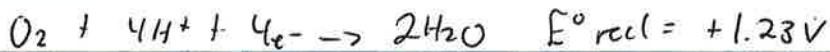


battery provides energy to make electrolytic cell go

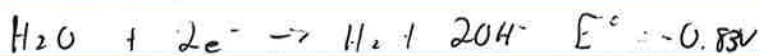
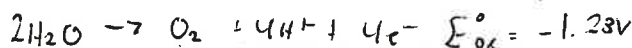
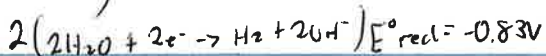
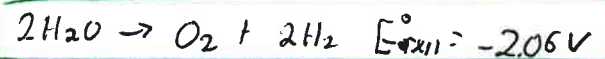
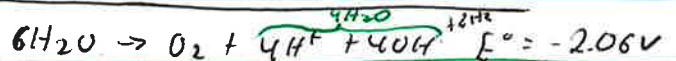
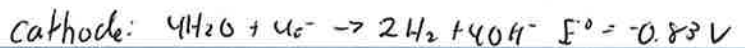


anything below this on the chart will not happen in aqueous solutions

also...



anything above this in the chart cannot be oxidized in aqueous solutions.



pick what makes it the least negative

$$\text{charge} = \text{current} \times \text{time}$$

$$n = 4e^{-}$$

$$7200\text{ C} = 2.00\text{ Amp} \times 3600\text{ s}$$

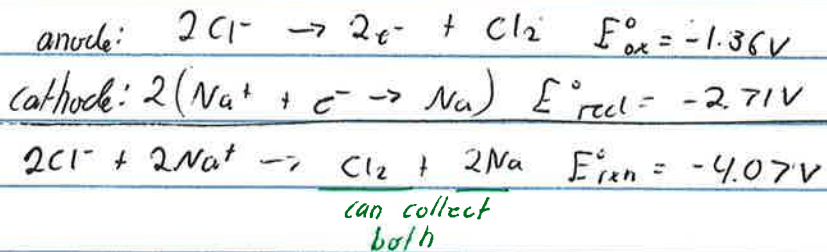
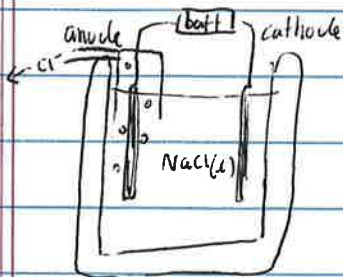
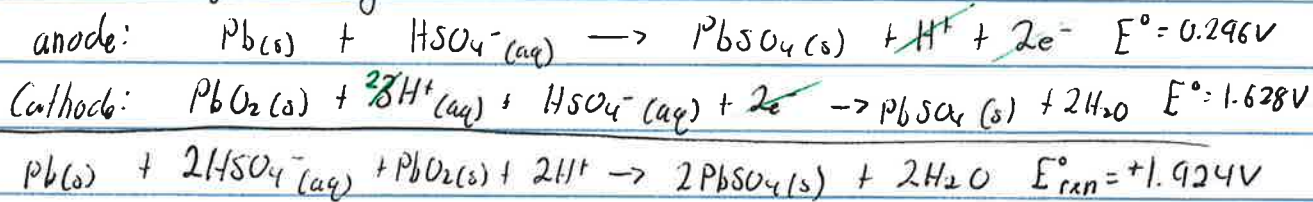
$$1\text{ mol } e^{-} = 96500\text{ C}$$

$$\frac{7200\text{ C}}{96500\text{ C}} \times 1\text{ mol } e^{-} = 0.0746\text{ mol } e^{-} = n_{e^{-}}$$

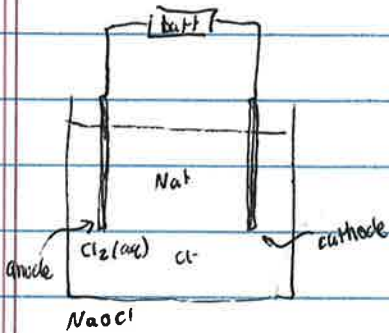
$$\frac{0.0746\text{ mol } e^{-}}{4\text{ mol } e^{-}} \times 2\text{ mol } \text{H}_2 = 0.0373\text{ mol } \text{H}_2$$

you could then use $PV = nRT$ to find V or P .

Pb storage battery

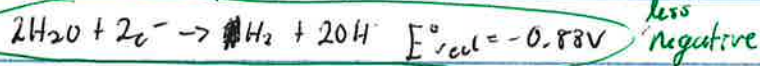


electrolysis of NaCl(aq)

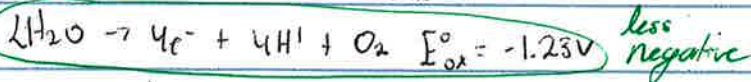
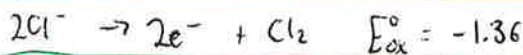


anode

cathode possibilities:



anode possibilities:



may also see some Cl2 since they are close