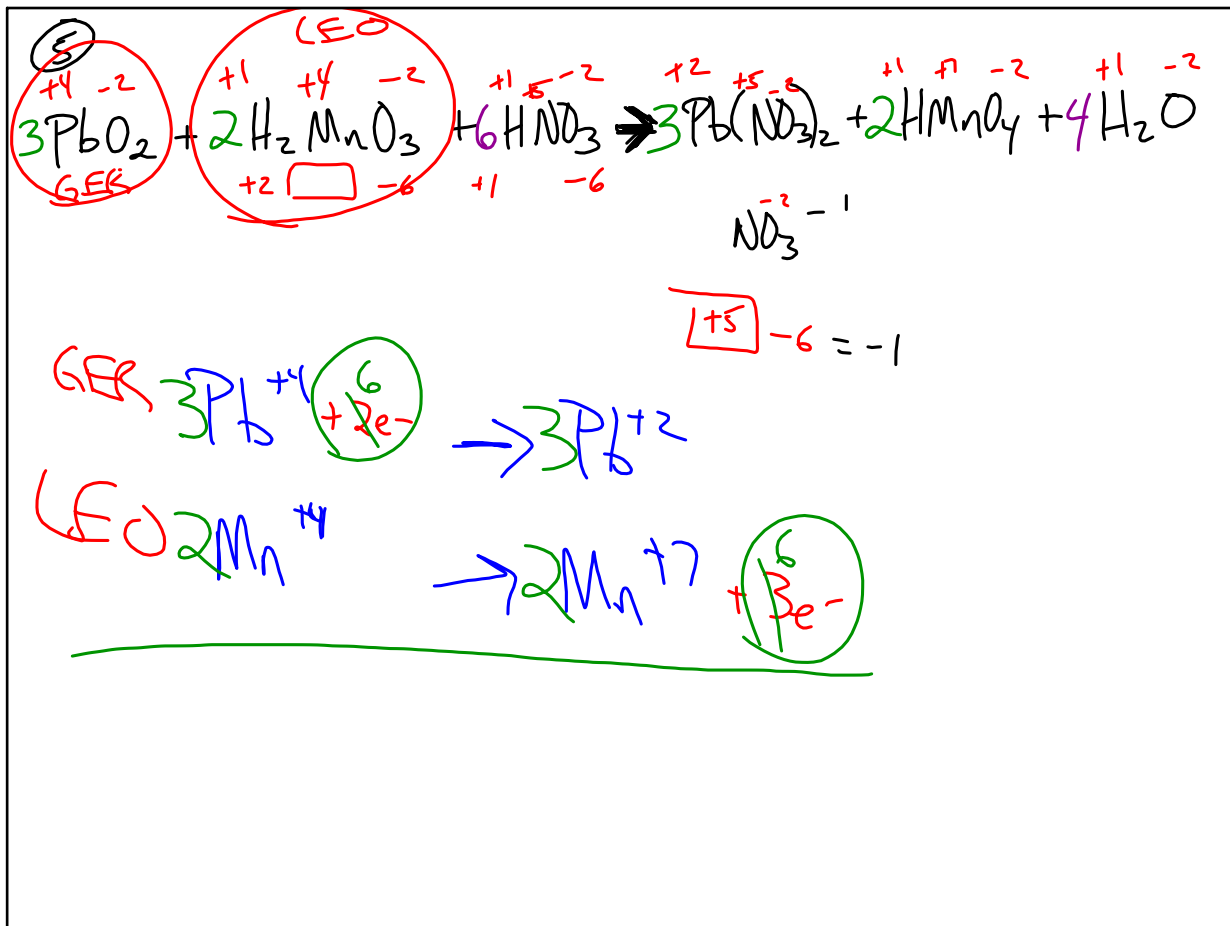


May 12-8:35 AM



May 12-8:51 AM

**Electrochem**  $e^-$  move in wire = electricity

(attracts  $e^-$ ) **⊕ POLE**

(L) (R) (S) (R) (E) (D) (O) (X) reaction

**FAT (More mass) RED Cathode (Red Cat)**

**LEO Anode (An Ox) (lose mass)**

**SALT BRIDGE**  $NaNO_3$   $NO_3^-$   $Na^+$   $NO_3^-$

$Cu(s)$   $Cu^{2+}$   $NO_3^-$   $Zn(s)$   $Zn^{2+}$   $NO_3^-$

$Cu(NO_3)_2(aq)$   $Zn(NO_3)_2(aq)$

$Cu^{2+}(aq) + 2e^- \rightarrow Cu^0(s) (+0.34V)$

$Zn^0(s) \rightarrow Zn^{2+}(aq) + 2e^- (+0.76V)$

**Battery electrochemical cell**

**Spont Redox rxn Produce electricity**

$Cu^{2+}(aq) + Zn^0(s) \rightarrow Cu^0(s) + Zn^{2+}(aq) (+1.10V)$

ox Zn  
red Cu

Repeats  $e^-$  **⊖ POLE**

May 12-9:00 AM

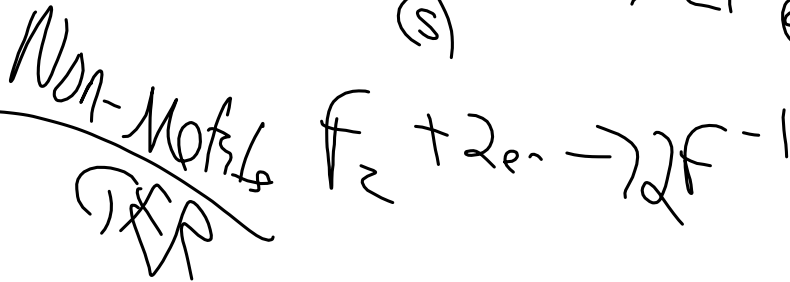
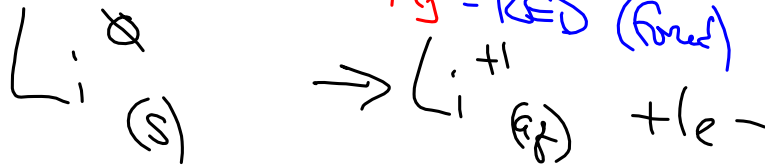
**Ⓜ Activity Series.**

Metals LEO

**Ⓜ Ba, Mg**

Ba - OX

Mg - RED (forced)



May 12-9:10 AM

Voltage in Battery

$\text{Al}^0(\text{s}) / \text{Fe}^0(\text{s})$   
 $\text{Al}(\text{NO}_3)_3$   
 (aq)

$\text{Fe}^{+2}(\text{s})$   
 $\text{Fe}(\text{NO}_3)_2$   
 (aq)

FAT RED CAT ⊕

GER  $3\text{Fe}^{+2}(\text{aq}) + 6e^- \rightarrow 3\text{Fe}^0(\text{s}) \quad -0.44\text{V}$

LEC

Anox ⊖  $2\text{Al}(\text{s}) \rightarrow 2\text{Al}^{+3} + 6e^- \quad +1.66\text{V}$

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$3\text{Fe}^{+2}(\text{aq}) + 2\text{Al}(\text{s}) \rightarrow 3\text{Fe}^0(\text{s}) + 2\text{Al}^{+3}(\text{aq}) \quad +1.22\text{V}$

May 12-9:46 AM

HW

P 29 + 34  
 (A) # 1-8

May 12-10:02 AM