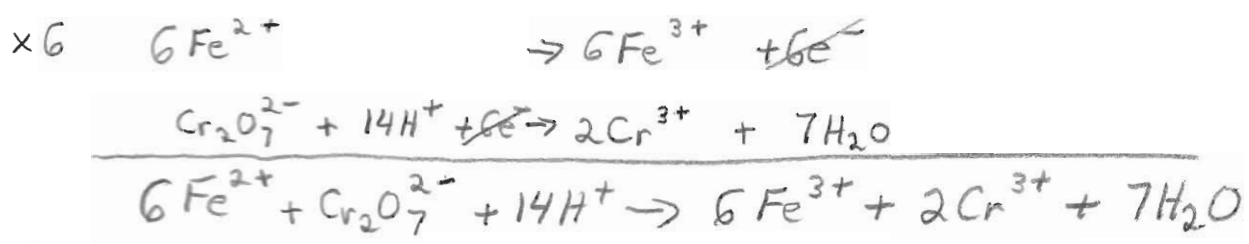
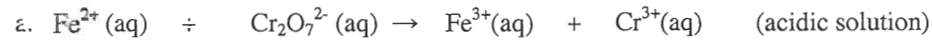
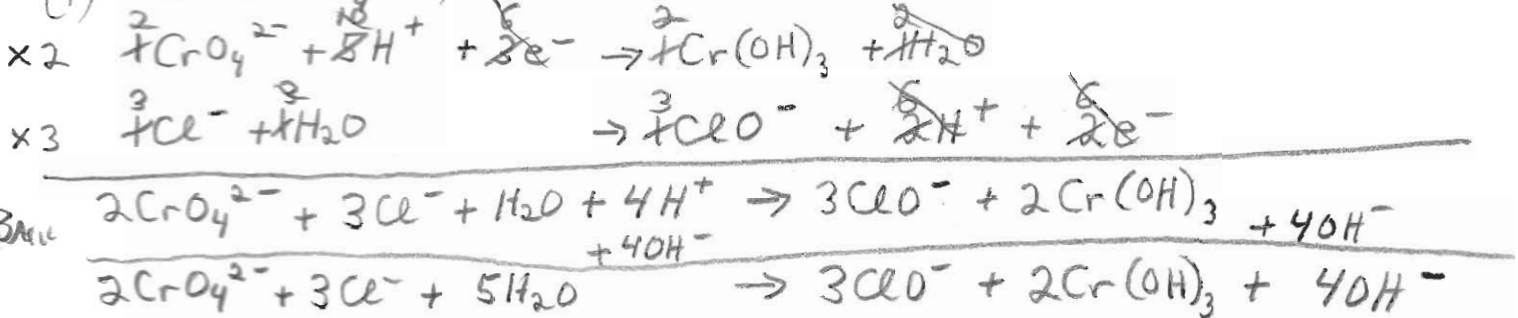


(8) 1. (17 Pts) Balance the following Redox reactions:

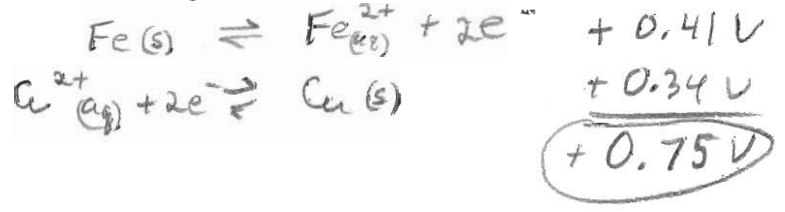


(9) b. $CrO_4^{2-}(aq) + Cl^-(aq) \rightarrow ClO^-(aq) + Cr(OH)_3(s)$ (basic solution)

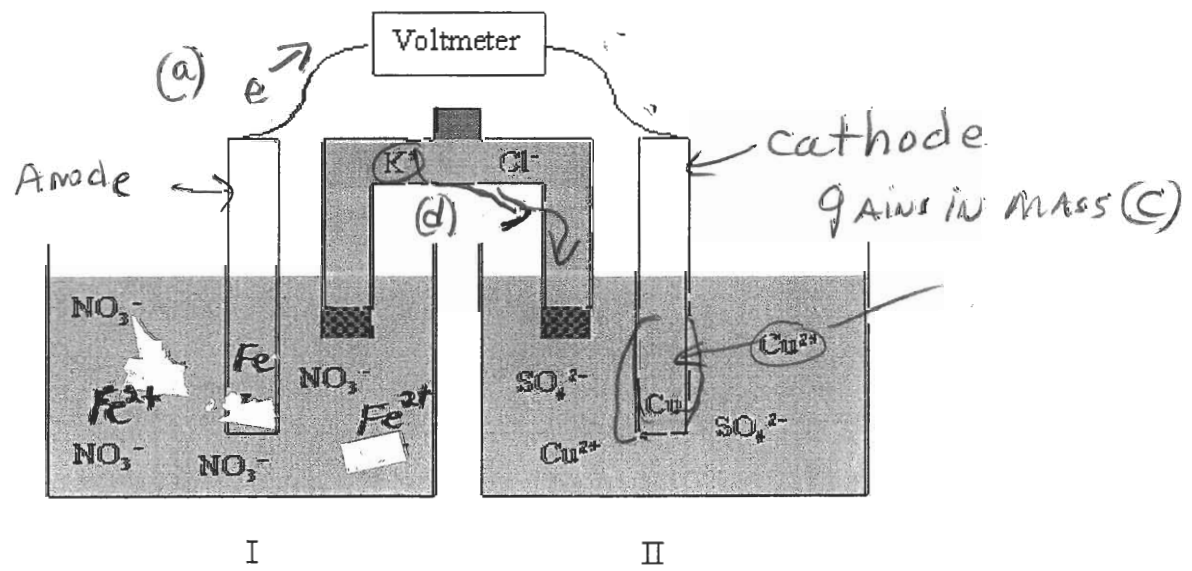


2. (4 Pts) A strip of iron is placed in a 1 M solution of iron(II) sulfate, and a strip of copper is placed in a 1 M solution of copper(II) chloride. The two solutions are connected with a salt bridge, and the two metals are connected by a wire.

Reduction Half-Reaction	E° (V)
$Fe^{2+}(aq) + 2e^- \rightleftharpoons Fe(s)$	-0.41
$Cu^{2+}(aq) + 2e^- \rightleftharpoons Cu(s)$	0.34



Determine the resulting voltage of the cell



3. (4 Pts) In the above diagram
- Show the direction of electron flow.
 - Label the anode and the cathode.
 - Indicate which electrode would have a gain in mass.
 - Show the direction of the K^+ ion flow.