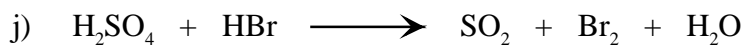
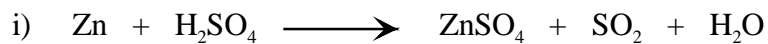
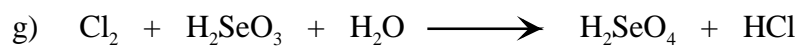
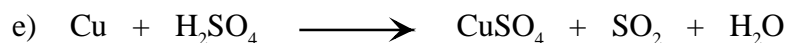
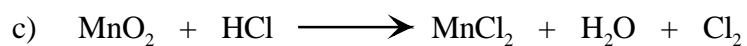
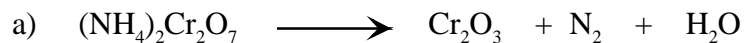
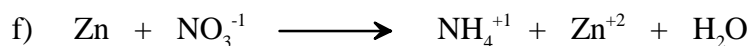
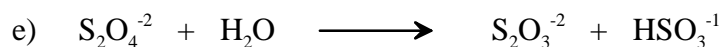
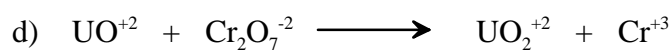
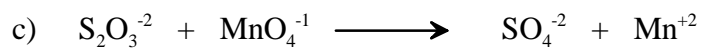
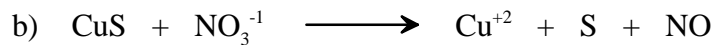
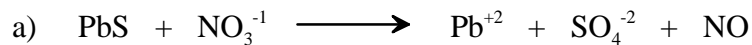


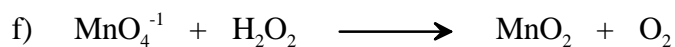
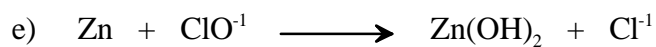
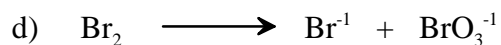
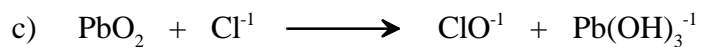
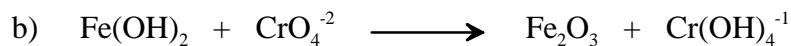
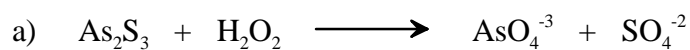
1. Balance the following oxidation-reduction reactions.



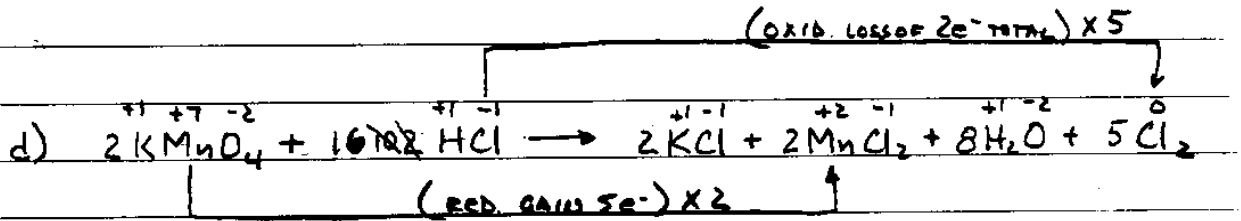
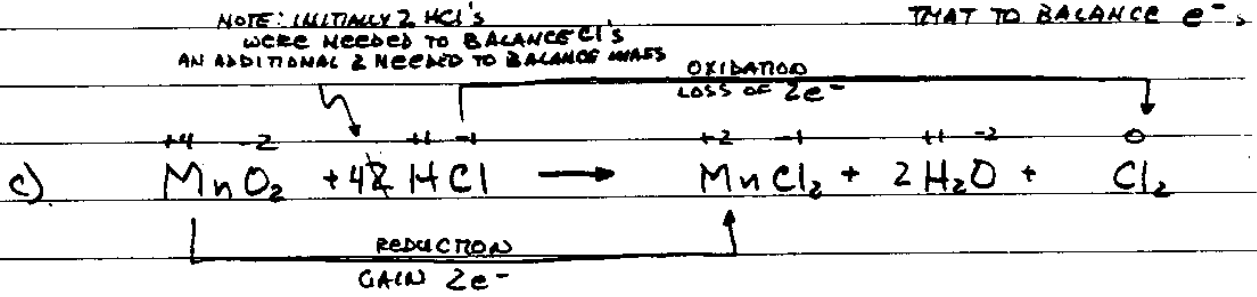
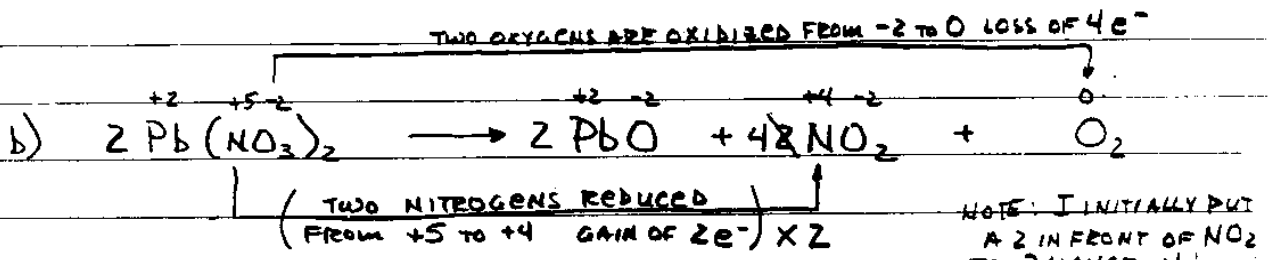
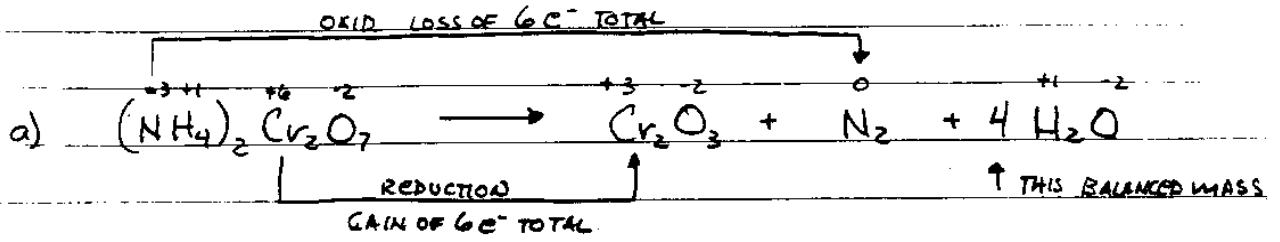
2. The reactions here are in acidic solution. You *may* need to use  $\text{H}^+$  or  $\text{H}^+/\text{H}_2\text{O}$  to balance the equation.



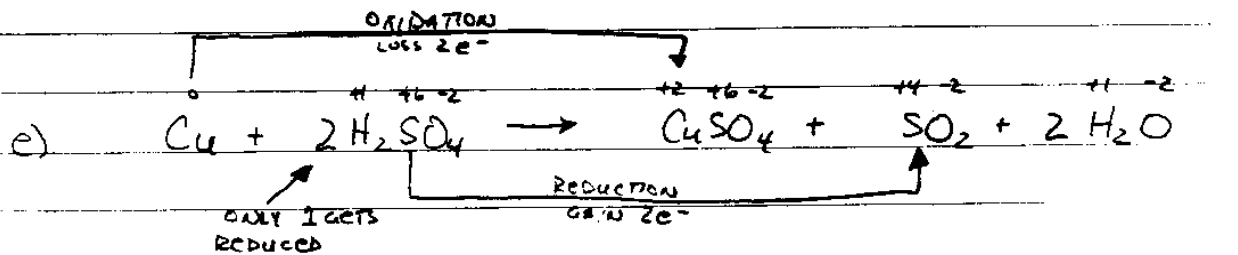
3. The reactions here are in basic solution. You *may* need to use  $\text{OH}^-$  or  $\text{OH}^-/\text{H}_2\text{O}$  to balance the equation.



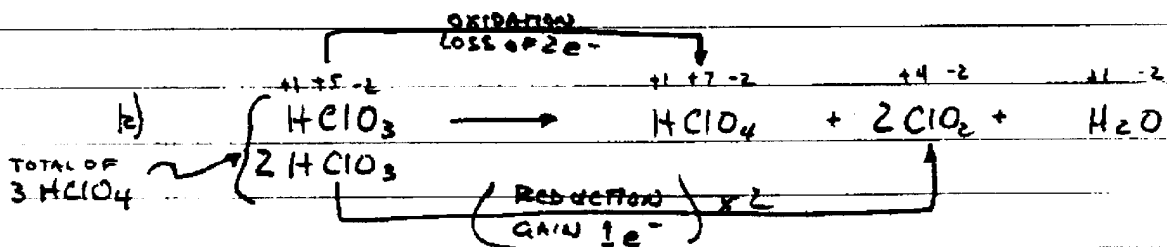
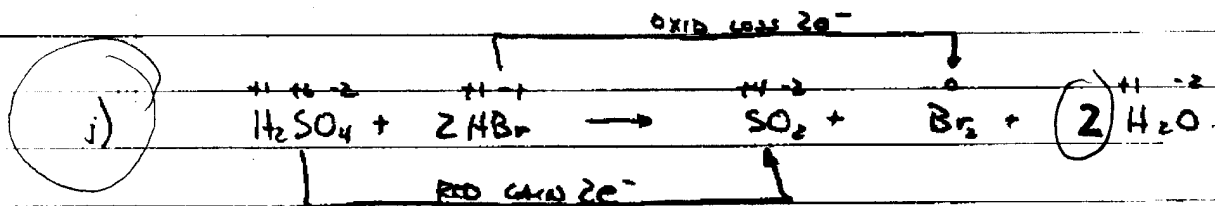
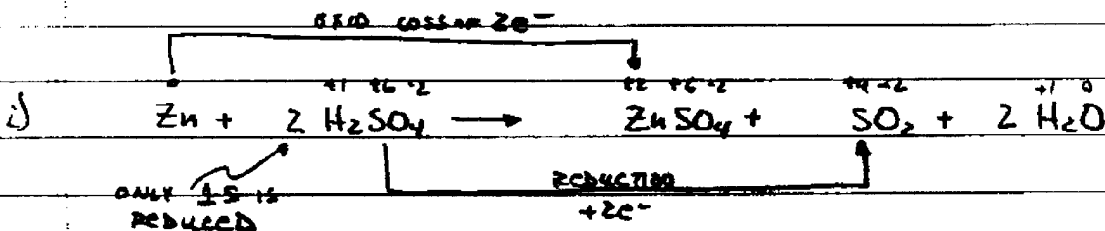
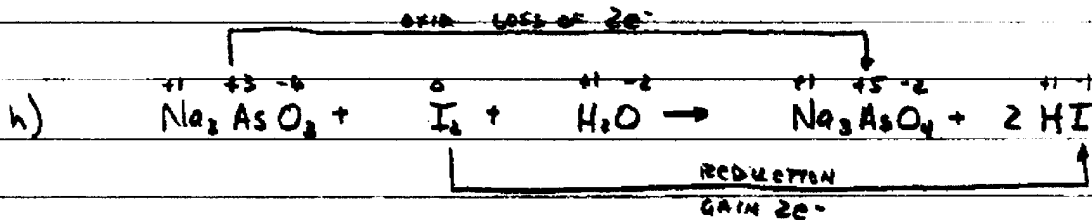
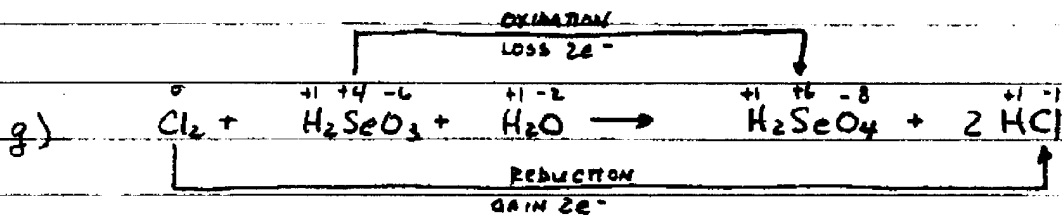
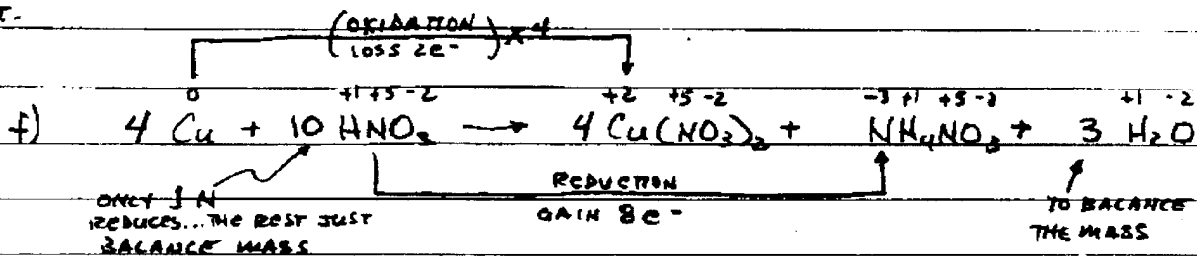
#1



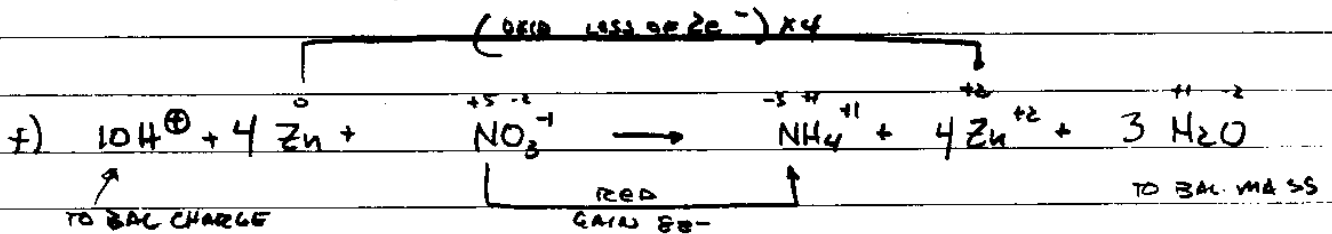
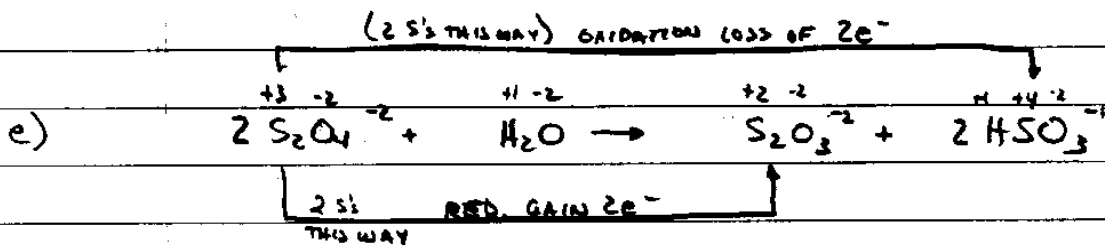
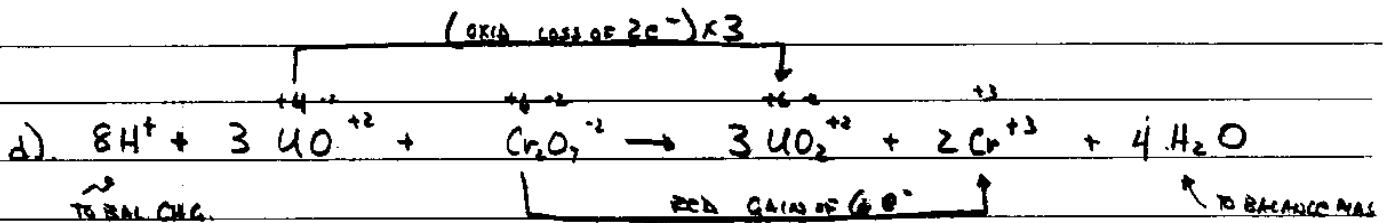
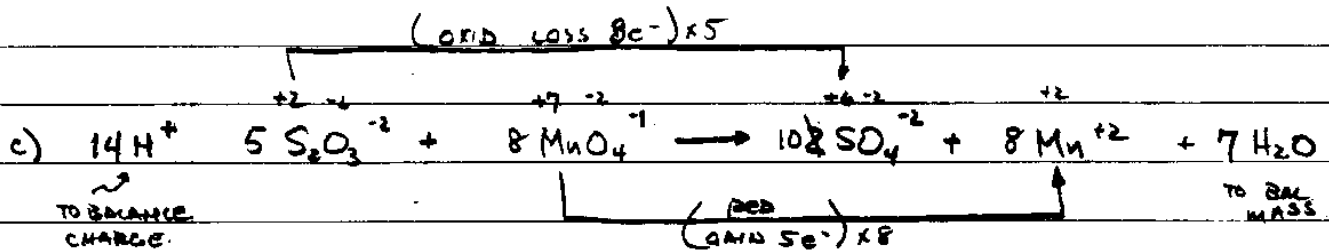
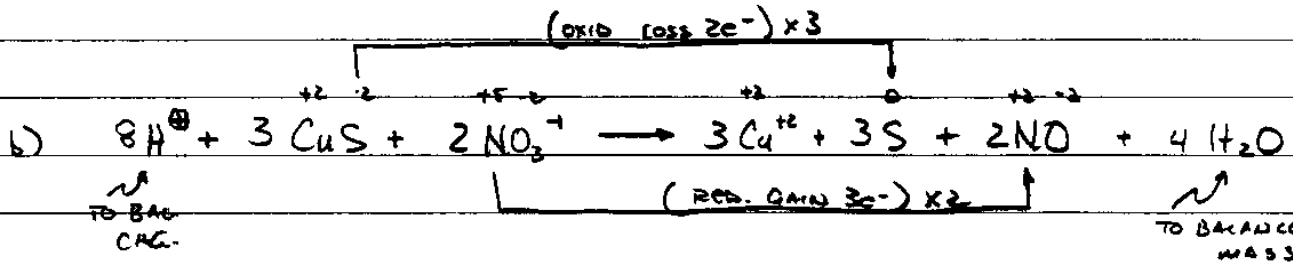
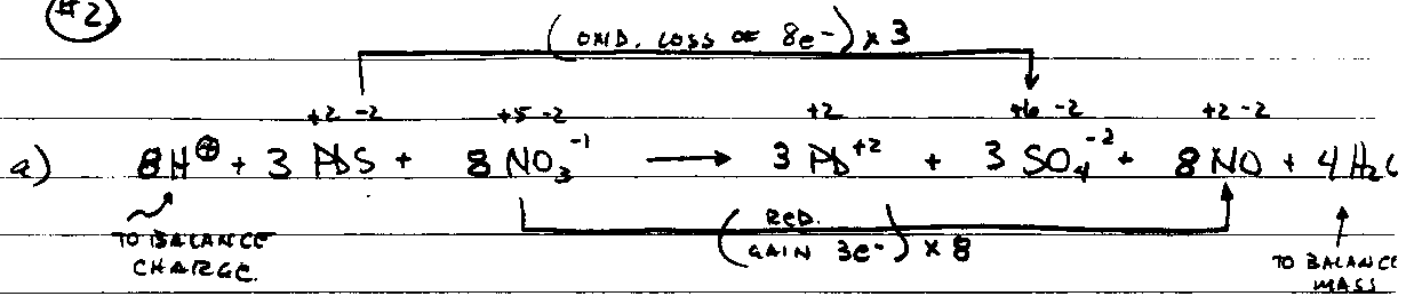
NOTE THAT 6  $\text{Cl}^-$  IN ADDITION TO THE 10  $\text{Cl}^-$ 'S THAT OXIDIZED MUST BE ADDED TO BALANCE MASS. THESE ADDITIONAL  $\text{Cl}^-$ 'S DID NOT OXIDIZE... THEY ENDED UP IN  $\text{KCl}$  AND  $\text{MnCl}_2$



#1 CONT.



#2



#3

