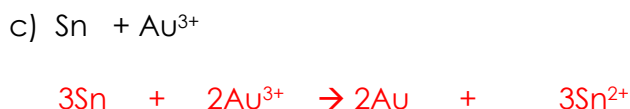
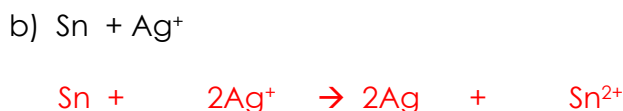
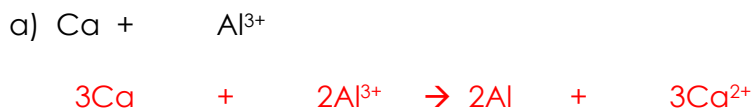


## SRP Table Worksheet

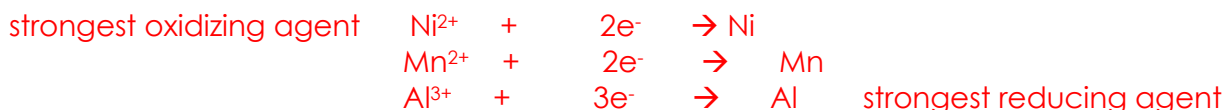
1. Describe the following reaction as oxidation or reduction. Circle all oxidizing agents.



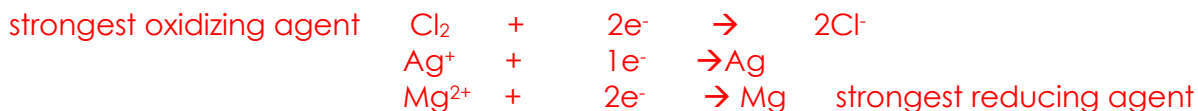
2. Complete and balance the following reactions:



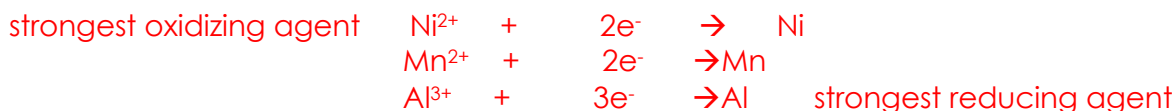
3.  $\text{Ni}^{2+}$  reacts with Mn, however,  $\text{Al}^{3+}$  does not react with Mn. Rank the oxidizing agents in order of decreasing strength. Rank the reducing agents in order of decreasing strength.



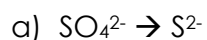
4.  $\text{Cl}_2$  reacts with Ag, however, Ag does not react with  $\text{Mg}^{2+}$ . Rank the oxidizing agents in order of decreasing strength. Rank the reducing agents in order of decreasing strength.



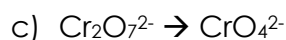
5.  $\text{Ni}^{2+}$  reacts with Mn, however,  $\text{Al}^{3+}$  does not react with Mn. Rank the reducing agents in order of decreasing strength. Rank the oxidizing agents in order of decreasing strength.



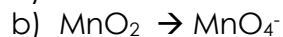
6. Classify as oxidation, reduction or neither.



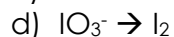
reduction



neither



oxidation



reduction

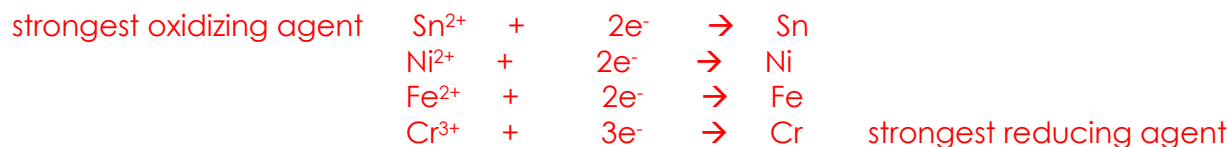
7. Given the following lab data

$\text{SnCl}_2$	&	Ni	Spontaneous
$\text{Ni}(\text{NO}_3)_2$	&	Fe	Spontaneous
$\text{Cr}(\text{NO}_3)_3$	&	Fe	Non spontaneous.

i) Write three balanced equations.



ii) Rank the oxidizing agents in decreasing order of strength.

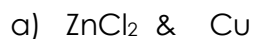


iii) Rank the reducing agents in decreasing order of strength. See above.

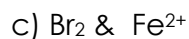
iv) Will  $\text{SnCl}_2$  react with Cr? Explain? Yes, because  $\text{Sn}^{2+}$  is a stronger oxidizing agent than  $\text{Cr}^{3+}$

v) Will  $\text{Fe}^{2+}$  react with Sn? No, because  $\text{Fe}^{2+}$  is a weaker oxidizing agent than  $\text{Sn}^{2+}$

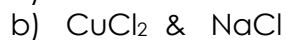
8. Describe as spontaneous or non-spontaneous. Use your reduction potential chart.



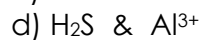
nonspontaneous



spontaneous



nonspontaneous



nonspontaneous

9. Can you keep HCl in a Zn container?

No, Spontaneous reaction.

What about an Au container?

Yes, nonspontaneous reaction.