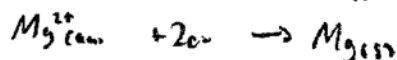
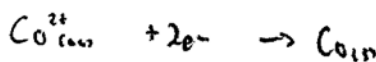
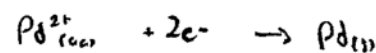
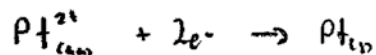
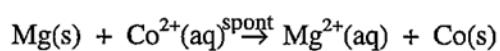
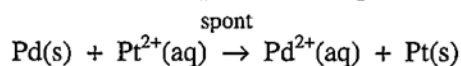
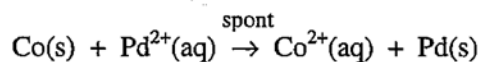
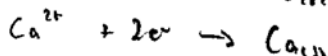
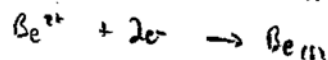
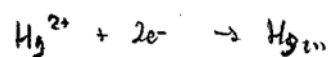
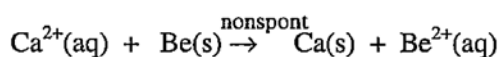
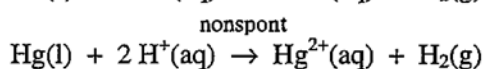
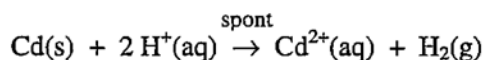


### Generating Redox Tables

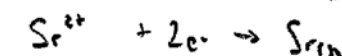
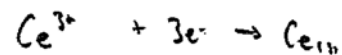
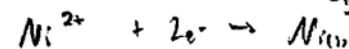
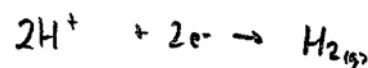
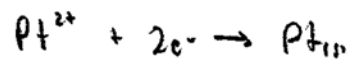
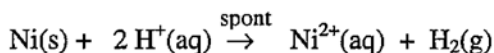
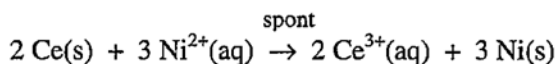
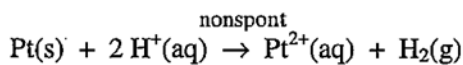
1. From the evidence given, **set up a table** of relative strengths of oxidizing and reducing agents. Write all half-reaction equations as reductions and label the strongest oxidizing agent and the strongest reducing agent.



2. The following equations are interpretations of the evidence from the reactions of four metals with various cation solutions. **Make a table** of redox half-reactions and arrange the four metallic ions and the hydrogen ion in order of their decreasing tendency to react.



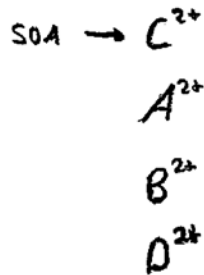
3. In an experiment, four metals were placed into test tubes containing various ion solutions. Their resulting behaviour is communicated by the equations below. **List the oxidizing agents** from strongest to weakest.



4. Four metals A, B, C, & D were tested with separate solutions of  $A^{2+}$ ,  $B^{2+}$ ,  $C^{2+}$  &  $D^{2+}$ . Some of the results are summarized in the following table:

Metal	Solution			
	$A^{2+}$	$B^{2+}$	$C^{2+}$	$D^{2+}$
A		(1) no reaction	reaction	
B				(4) no reaction
D	(3) reaction			

List the ions in order from the strongest to weakest oxidizing agent.



5. Four non-metal oxidizing agents  $X_2$ ,  $Y_2$ ,  $Z_2$  and  $W_2$  are combined with solutions of ions:  $X^-$ ,  $Y^-$ ,  $Z^-$  and  $W^-$ .

The following results were obtained;

- (1)  $X_2$  reacts with  $W^-$  and  $Y^-$  only.  
 (2)  $Y^-$  will reduce  $W_2$

List the reducing agents from strongest to weakest

