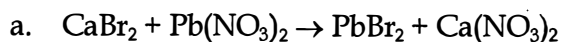


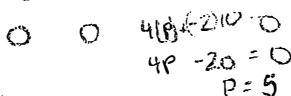
7.2 Balancing Redox Reactions with Half Reactions Assignment

1. For each of these reactions, determine whether or not it is a redox reaction. If any are, identify oxidizing and reducing agents in those reactions.

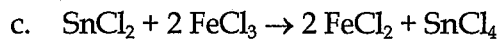


NOT REDOX

element	Initial Ox. No		Final Ox. No.	e ⁻ gained or lost	Oxidized or reduced	Agent
		→				
		→				

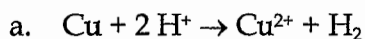


element	Initial Ox. No		Final Ox. No.	e ⁻ gained or lost	Oxidized or reduced	Agent
P	0	→	5	5 lost	OX	reducing
O	0	→	-2	2 gained	RED	oxidizing

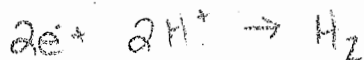


element	Initial Ox. No		Final Ox. No.	e ⁻ gained or lost	Oxidized or reduced	Agent
Sn	+2	→	+4	2 lost	OX	Reducing
Fe	+3	→	+2	1 gained	RED	oxidizing

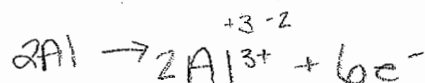
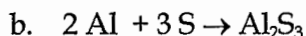
2. Break each equation into two half-reactions. Identify each half-reaction as oxidation or reduction.



oxidation



reduction

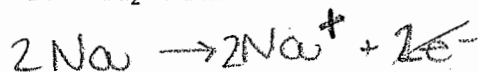
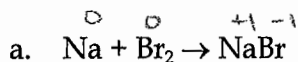


oxidation

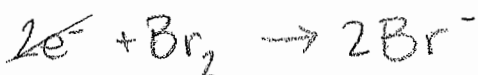


reduction

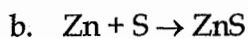
3. Balance the following equations using the half-reaction method. Identify what is reduced and what is the reducing agent.



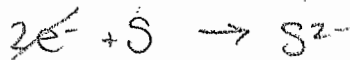
red agent



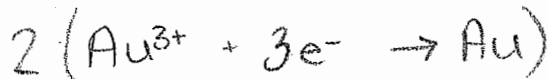
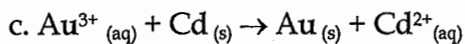
reduced



red agent



red



red



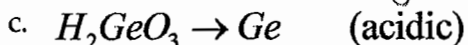
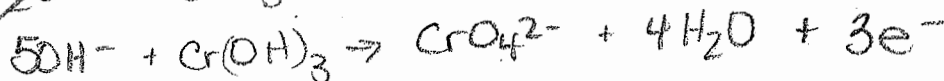
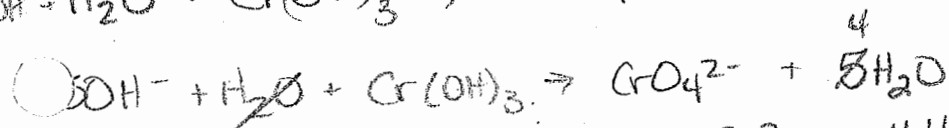
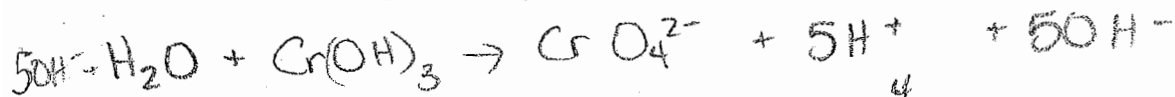
reducing agent



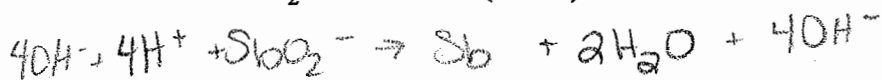
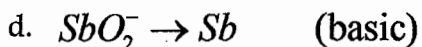
4. Write a balanced equation for each of the following half-reactions, and state whether it represents oxidation or reduction.



Being that electrons are being gained, this is a reduction half reaction.



Being that electrons are being gained, this is a reduction half reaction.



Being that electrons are being gained, this is a reduction half reaction.

