

Chemical Reactions

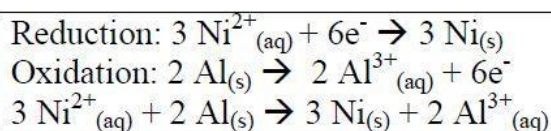
4.9 Oxidation-Reductions (Redox) Reactions Part I

Worksheet Key

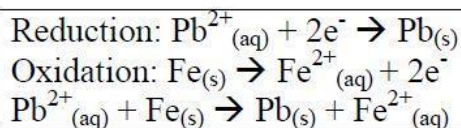
- | | |
|---------------------------------|-----|
| 1) Will magnesium oxidize zinc? | No |
| 2) Will tin reduce iron? | No |
| 3) Will gold oxidize iron? | Yes |
| 4) Will silver oxidize copper? | Yes |

Predict the products, write the oxidation and reduction half reactions, and write the balanced net ionic equations for each of the reactions in questions 5 through 16.

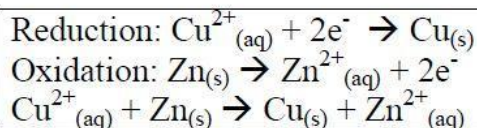
- 5) A solution of nickel (II) chloride is poured over solid aluminum.



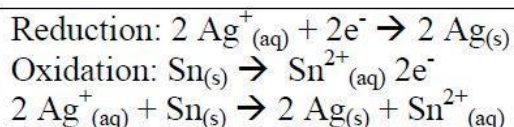
- 6) Solid iron is placed in a solution of lead (II) nitrate.



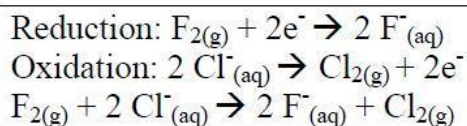
- 7) Solid zinc pellets are sprinkled into a solution of copper (II) nitrate.



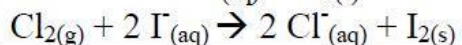
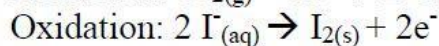
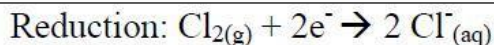
- 8) A strip of solid tin is placed in a solution of silver nitrate.



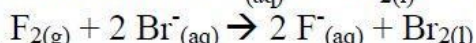
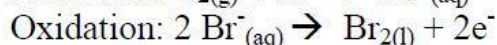
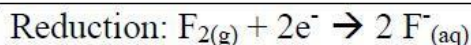
- 9) Fluorine gas is bubbled through a solution of sodium chloride.



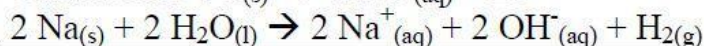
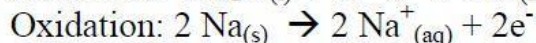
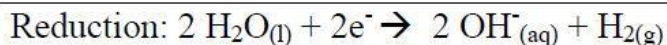
10) Bubbles of chlorine gas are forced through a solution of potassium iodide.



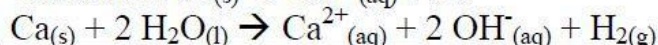
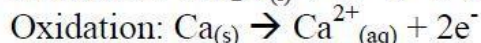
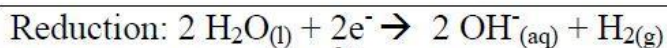
11) Fluorine gas is bubbled through a solution of potassium bromide.



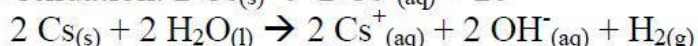
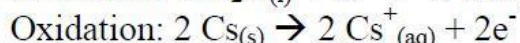
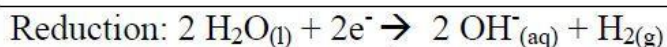
12) A small piece of sodium metal is placed in distilled water.



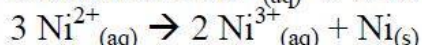
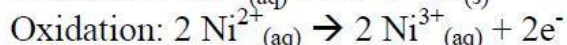
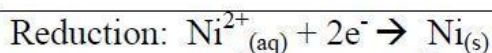
13) Solid calcium is added to distilled water.



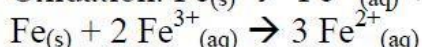
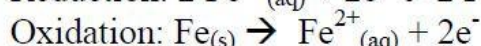
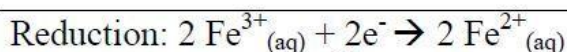
14) Solid cesium is placed in a beaker of water.



15) A solution of nickel (II) nitrate is allowed to stand for several months.

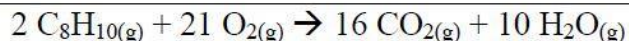


16) Iron filings are stirred into a solution of iron (III) bromide, and the mixture is allowed to stand.

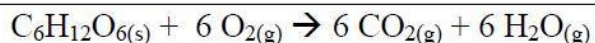


Predict the products and write the balanced chemical equations for the redox reactions in questions 17 through 23.

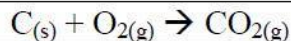
17) C_8H_{10} is burned in air.



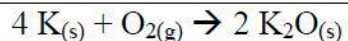
18) The metabolism of glucose ($\text{C}_6\text{H}_{12}\text{O}_6$) during digestion, which is a reaction that produces energy for the organism.



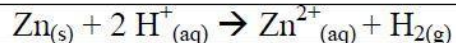
19) Carbon is burned in air.



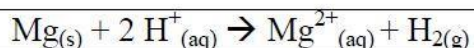
20) Potassium is burned in air.



21) A strip of solid zinc metal is added to a solution of sulfuric acid.



22) Solid magnesium metal is added to a solution of hydrochloric acid.



23) Solid aluminum metal is added to a solution of hydrochloric acid.

