## 

Determine in the following which atoms have been oxidized.

1. 
$$C + H_2SO_4 \rightarrow CO_2 + SO_2 + H_2O$$

2. 
$$S^{2-} + NO_3^{-} \rightarrow S + NO$$

3. 
$$NH_3 + NO_2 \rightarrow N_2 + H_2O$$

4. 4Fe + 
$$3O_2 \rightarrow 2Fe_2O_3$$

5. Mg + 2HCl 
$$\rightarrow$$
 MgCl<sub>2</sub> + H<sub>2</sub>

6. Sb + 
$$HNO_3 \rightarrow Sb_2O_3 + NO + H_2O$$

7. 
$$Cl_2 + 2NaBr \rightarrow 2NaCl + Br_2$$

8. 
$$2Sr + O_2 \rightarrow 2SrO$$

9. Si + 
$$2F_2 \rightarrow SiF_4$$

10. 
$$\text{HNO}_3 + \text{HI} \rightarrow \text{NO} + \text{I}_2 + \text{H}_2\text{O}$$

## OXIDATION Worksheet

Answers

1. 
$$C + H_2SO_4 \rightarrow CO_2 + SO_2 + H_2O$$
  
C is oxidized to  $CO_2$ ;  $0 \rightarrow +4$ 

2. 
$$S^{2-} + NO_3^- \rightarrow S + NO$$
  
 $S^{2-}$  is oxidized to S;  $-2 \rightarrow 0$ 

3. 
$$NH_3 + NO_2 \rightarrow N_2 + H_2O$$
  
 $N^{3-}$  is oxidized to N;  $-3 \rightarrow 0$ 

4. 4Fe + 
$$3O_2 \rightarrow 2Fe_2O_3$$
  
Fe is oxidized to  $Fe^{3+}$ ;  $0 \rightarrow +3$ 

5. Mg + 2HCl 
$$\rightarrow$$
 MgCl<sub>2</sub> + H<sub>2</sub>

Mg is oxidized to Mg<sup>2+</sup>; 0  $\rightarrow$  +2

6. Sb + HNO<sub>3</sub> 
$$\rightarrow$$
 Sb<sub>2</sub>O<sub>3</sub> + NO + H<sub>2</sub>O  
Sb is oxidized to Sb<sup>3+</sup>; 0  $\rightarrow$  +3

7. 
$$Cl_2 + 2NaBr \rightarrow 2NaCl + Br_2$$
  
Br<sup>-</sup> is oxidized to Br; -1  $\rightarrow$  0

8. 
$$2Sr + O_2 \rightarrow 2SrO$$
  
Sr is oxidized to  $Sr^{2+}$ ;  $0 \rightarrow +2$ 

9. Si + 
$$2F_2 \rightarrow SiF_4$$
  
Si is oxidized to  $Si^{4+}$ ;  $0 \rightarrow +4$ 

10. 
$$\text{HNO}_3 + \text{HI} \rightarrow \text{NO} + \text{I}_2 + \text{H}_2\text{O}$$
  
 $\text{I}^-$  is oxidized to I;  $-1 \rightarrow 0$