Name

Period\_\_\_\_

## **Balancing Equations Practice Number Three**

Balance the following equations by placing the appropriate coefficient on the lines.

1) 
$$\underline{\qquad}$$
 Fe(OH)<sub>3</sub>  $\rightarrow$   $\underline{\qquad}$  Fe<sub>2</sub>O<sub>3</sub> +  $\underline{\qquad}$  H<sub>2</sub>O

2) 
$$\underline{\qquad}$$
  $H_2 + \underline{\qquad}$   $O_2 \rightarrow \underline{\qquad}$   $H_2O$ 

3) 
$$\underline{\hspace{1cm}} HNO_2 \rightarrow \underline{\hspace{1cm}} N_2O_3 + \underline{\hspace{1cm}} H_2O$$

4) 
$$\underline{\qquad}$$
  $H_2SO_4 \rightarrow \underline{\qquad}$   $SO_3 + \underline{\qquad}$   $H_2O$ 

5) 
$$\underline{\qquad}$$
 K +  $\underline{\qquad}$  Cl<sub>2</sub>  $\rightarrow$   $\underline{\qquad}$  KCl

6) 
$$\underline{\hspace{1cm}}$$
 KCl +  $\underline{\hspace{1cm}}$  O<sub>2</sub>  $\rightarrow$   $\underline{\hspace{1cm}}$  KClO<sub>3</sub>

7) 
$$\underline{\qquad}$$
 Li<sub>2</sub>O +  $\underline{\qquad}$  H<sub>2</sub>O  $\rightarrow$   $\underline{\qquad}$  LiOH

8) 
$$\underline{\hspace{1cm}}$$
 Mg +  $\underline{\hspace{1cm}}$  O<sub>2</sub>  $\rightarrow$   $\underline{\hspace{1cm}}$  MgO

9) 
$$\underline{\hspace{1cm}} MgCl_2 \rightarrow \underline{\hspace{1cm}} Mg + \underline{\hspace{1cm}} Cl_2$$

10) 
$$\underline{\hspace{1cm}}$$
 Na<sub>2</sub>O +  $\underline{\hspace{1cm}}$  CO<sub>2</sub>  $\rightarrow$   $\underline{\hspace{1cm}}$  Na<sub>2</sub>CO<sub>3</sub>

11) \_\_\_ Ba(OH)<sub>2</sub> + \_\_\_ H<sub>2</sub>SO<sub>4</sub> 
$$\rightarrow$$
 \_\_\_ H<sub>2</sub>O + \_\_\_ BaSO<sub>4</sub>

12) 
$$\underline{\hspace{0.2cm}}$$
 Br<sub>2</sub> +  $\underline{\hspace{0.2cm}}$  KI  $\rightarrow$   $\underline{\hspace{0.2cm}}$  KBr +  $\underline{\hspace{0.2cm}}$  I<sub>2</sub>

13) \_\_\_ Ca + \_\_\_ 
$$H_2O \rightarrow$$
 \_\_\_ Ca(OH)<sub>2</sub> + \_\_\_  $H_2$ 

14) \_\_\_ 
$$Ca_3(PO_4)_2 +$$
\_\_  $H_2SO_4 \rightarrow$ \_\_  $CaSO_4 +$ \_\_  $H_3PO_4$ 

15) 
$$C_4H_{10} + O_2 \rightarrow CO_2 + H_2O$$

16) 
$$\underline{\hspace{1cm}}$$
 Cl<sub>2</sub> +  $\underline{\hspace{1cm}}$  NaBr  $\rightarrow$   $\underline{\hspace{1cm}}$  NaCl +  $\underline{\hspace{1cm}}$  Br<sub>2</sub>

17) \_\_\_ 
$$Cu +$$
\_\_  $AgNO_3 \rightarrow$ \_\_  $Ag +$ \_\_  $Cu(NO_3)_2$ 

18) \_\_\_ Fe + \_\_\_ Cu(NO<sub>3</sub>)<sub>2</sub> 
$$\rightarrow$$
 \_\_\_ Fe(NO<sub>3</sub>)<sub>2</sub> + \_\_\_ Cu

19) \_\_\_ Fe + \_\_\_ HCl 
$$\rightarrow$$
 \_\_\_ FeCl<sub>3</sub> + \_\_\_ H<sub>2</sub>

20) 
$$\longrightarrow$$
 Fe<sub>3</sub>O<sub>4</sub> +  $\longrightarrow$  CO  $\rightarrow$  CO<sub>2</sub> +  $\longrightarrow$  Fe

21) \_\_\_ 
$$HCl +$$
\_\_  $FeS \rightarrow$ \_\_  $FeCl_2 +$ \_\_  $H_2S$ 

22) 
$$\_$$
 HCl +  $\_$  NaOH  $\rightarrow$   $\_$  H<sub>2</sub>O +  $\_$  NaCl

23) \_\_\_ 
$$H_3PO_4 +$$
 \_\_\_  $Ca(OH)_2 \rightarrow$  \_\_\_  $H_2O +$  \_\_\_  $Ca_3(PO_4)_2$ 

24) 
$$\underline{\hspace{1cm}}$$
 H<sub>2</sub>SO<sub>4</sub>+  $\underline{\hspace{1cm}}$  KOH  $\rightarrow$   $\underline{\hspace{1cm}}$  K<sub>2</sub>SO<sub>4</sub> +  $\underline{\hspace{1cm}}$  H<sub>2</sub>O

25) \_\_\_ NaCl + \_\_\_ AgNO<sub>3</sub> 
$$\rightarrow$$
 \_\_\_ NaNO<sub>3</sub> + \_\_\_ AgCl

26) 
$$\underline{\hspace{1cm}}$$
 NaI +  $\underline{\hspace{1cm}}$  Br<sub>2</sub>  $\rightarrow$   $\underline{\hspace{1cm}}$  NaBr +  $\underline{\hspace{1cm}}$  I<sub>2</sub>

27) 
$$Mg_3N_2 + H_2O \rightarrow Mg(OH)_2 + NH_3$$

28) 
$$\underline{\hspace{1cm}}$$
 CaCO<sub>3</sub> +  $\underline{\hspace{1cm}}$  HCl  $\rightarrow$   $\underline{\hspace{1cm}}$  CaCl<sub>2</sub> +  $\underline{\hspace{1cm}}$  H<sub>2</sub>O +  $\underline{\hspace{1cm}}$  CO<sub>2</sub>

29) 
$$C_{21}H_{24}N_2O_4 + O_2 \rightarrow CO_2 + H_2O + NO_2$$

$$(30) _ C_2H_5SH + _ O_2 \rightarrow _ CO_2 + _ H_2O + _ SO_2$$