



## BALANCE THE GIVEN CHEMICAL EQUATIONS

### Worksheet - 9

- $\text{Fe}_2\text{O}_3 + 3 \text{C} = \underline{\hspace{1cm}} \text{CO} + 2 \text{Fe}$
- $\text{Cu}_2\text{S} + \underline{\hspace{1cm}} \text{Cu}_2\text{O} = \text{SO}_2 + 6 \text{Cu}$
- $\text{Fe}_2\text{O}_3 + \underline{\hspace{1cm}} \text{H}_2\text{SO}_4 = \underline{\hspace{1cm}} \text{H}_2\text{O} + \text{Fe}_2(\text{SO}_4)_3$
- $3 \text{Cl}_2 + \underline{\hspace{1cm}} \text{Al} = 2 \text{AlCl}_3$
- $\underline{\hspace{1cm}} \text{HNO}_3 + \text{Ca}(\text{OH})_2 = \text{Ca}(\text{NO}_3)_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$
- $\underline{\hspace{1cm}} \text{HCl} + \text{Ba}(\text{OH})_2 = \text{BaCl}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$
- $\text{K}_2\text{O} + \text{H}_2\text{O} = \underline{\hspace{1cm}} \text{KOH}$
- $\underline{\hspace{1cm}} \text{HI} + \text{Pb}(\text{NO}_3)_2 = \underline{\hspace{1cm}} \text{HNO}_3 + \text{PbI}_2$
- $\underline{\hspace{1cm}} \text{Ag} + 2 \text{H}_2\text{O} = \underline{\hspace{1cm}} \text{AgOH} + \text{H}_2$
- $\text{Ca}(\text{OH})_2 + \underline{\hspace{1cm}} \text{NH}_4\text{Cl} = \text{CaCl}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O} + 2 \text{NH}_3$
- $\text{MgCl}_2 + \underline{\hspace{1cm}} \text{NaOH} = \text{Mg}(\text{OH})_2 + \underline{\hspace{1cm}} \text{NaCl}$
- $\underline{\hspace{1cm}} \text{NaCl} + \text{H}_2\text{SO}_4 = \text{Na}_2\text{SO}_4 + \underline{\hspace{1cm}} \text{HCl}$
- $\underline{\hspace{1cm}} \text{SO}_3^{\{-2\}} + 2 \text{IO}_3 + 8 \text{H}^{\{+\}} = 2 \text{SO}_4^{\{+2\}} + \text{I}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$
- $\text{CaCl}_2 + \text{Na}_2\text{SO}_4 = \text{CaSO}_4 + \underline{\hspace{1cm}} \text{NaCl}$
- $\text{C}_5\text{H}_{12} + \underline{\hspace{1cm}} \text{O}_2 = \underline{\hspace{1cm}} \text{C} + 6 \text{H}_2\text{O}$
- $\text{Pb}_3\text{O}_4 + \underline{\hspace{1cm}} \text{HNO}_3 = 2 \text{Pb}(\text{NO}_3)_2 + \text{PbO}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$
- $3 \text{Cu} + \underline{\hspace{1cm}} \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + \underline{\hspace{1cm}} \text{NO} + 4 \text{H}_2\text{O}$
- $\text{AlN} + \underline{\hspace{1cm}} \text{H}_2\text{O} = \text{Al}(\text{OH})_3 + \text{NH}_3$
- $\text{K}_2\text{Cr}_2\text{O}_7 + 14 \text{HCl} = \underline{\hspace{1cm}} \text{KCl} + 2 \text{CrCl}_3 + \underline{\hspace{1cm}} \text{Cl}_2 + 7 \text{H}_2\text{O}$
- $\text{Mg} + \underline{\hspace{1cm}} \text{HCl} = \text{H}_2 + \text{MgCl}_2$



# ANSWERS

1.  $\text{Fe}_2\text{O}_3 + 3 \text{C} = 3 \text{CO} + 2 \text{Fe}$
2.  $\text{Cu}_2\text{S} + 2 \text{Cu}_2\text{O} = \text{SO}_2 + 6 \text{Cu}$
3.  $\text{Fe}_2\text{O}_3 + 3 \text{H}_2\text{SO}_4 = 3 \text{H}_2\text{O} + \text{Fe}_2(\text{SO}_4)_3$
4.  $3 \text{Cl}_2 + 2 \text{Al} = 2 \text{AlCl}_3$
5.  $2 \text{HNO}_3 + \text{Ca}(\text{OH})_2 = \text{Ca}(\text{NO}_3)_2 + 2 \text{H}_2\text{O}$
6.  $2 \text{HCl} + \text{Ba}(\text{OH})_2 = \text{BaCl}_2 + 2 \text{H}_2\text{O}$
7.  $\text{K}_2\text{O} + \text{H}_2\text{O} = 2 \text{KOH}$
8.  $2 \text{HI} + \text{Pb}(\text{NO}_3)_2 = 2 \text{HNO}_3 + \text{PbI}_2$
9.  $2 \text{Ag} + 2 \text{H}_2\text{O} = 2 \text{AgOH} + \text{H}_2$
10.  $\text{Ca}(\text{OH})_2 + 2 \text{NH}_4\text{Cl} = \text{CaCl}_2 + 2 \text{H}_2\text{O} + 2 \text{NH}_3$
11.  $\text{MgCl}_2 + 2 \text{NaOH} = \text{Mg}(\text{OH})_2 + 2 \text{NaCl}$
12.  $2 \text{NaCl} + \text{H}_2\text{SO}_4 = \text{Na}_2\text{SO}_4 + 2 \text{HCl}$
13.  $2 \text{SO}_3^{\{-2\}} + 2 \text{IO}_3 + 8 \text{H}^{\{+\}} = 2 \text{SO}_4^{\{+2\}} + \text{I}_2 + 4 \text{H}_2\text{O}$
14.  $\text{CaCl}_2 + \text{Na}_2\text{SO}_4 = \text{CaSO}_4 + 2 \text{NaCl}$
15.  $\text{C}_5\text{H}_{12} + 3 \text{O}_2 = 5 \text{C} + 6 \text{H}_2\text{O}$
16.  $\text{Pb}_3\text{O}_4 + 4 \text{HNO}_3 = 2 \text{Pb}(\text{NO}_3)_2 + \text{PbO}_2 + 2 \text{H}_2\text{O}$
17.  $3 \text{Cu} + 8 \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + 2 \text{NO} + 4 \text{H}_2\text{O}$
18.  $\text{AlN} + 3 \text{H}_2\text{O} = \text{Al}(\text{OH})_3 + \text{NH}_3$
19.  $\text{K}_2\text{Cr}_2\text{O}_7 + 14 \text{HCl} = 2 \text{KCl} + 2 \text{CrCl}_3 + 2 \text{Cl}_3 + 7 \text{H}_2\text{O}$
20.  $\text{Mg} + 2 \text{HCl} = \text{H}_2 + \text{MgCl}_2$



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### **Further Questions?**

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