



## BALANCE THE GIVEN CHEMICAL EQUATIONS

### Worksheet - 2

1.  $\text{S}_8 + 40 \text{H}_2\text{SO}_4 = \text{SO}_2 + 4 \text{H}_2\text{O}$
2.  $2 \text{Al} + \text{H}_3\text{PO}_4 = 3 \text{H}_2 + \text{AlPO}_4$
3.  $2 \text{KCN} + \text{H}_2\text{SO}_4 + 2 \text{H}_2\text{O} = \text{CO} + \text{K}_2\text{SO}_4 + (\text{NH}_4)_2\text{SO}_4$
4.  $\text{N}_2\text{H}_4 = \text{NH}_3 + \text{N}_2$
5.  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7 = \text{Cr}_2\text{O}_3 + \text{H}_2\text{O} + \text{N}_2$
6.  $2 \text{KCN} + \text{H}_2\text{SO}_4 + 2 \text{H}_2\text{O} = \text{CO} + \text{K}_2\text{SO}_4 + (\text{NH}_4)_2\text{SO}_4$
7.  $\text{Zn} + \text{H}_2\text{SO}_4 = \text{ZnSO}_4 + \text{SO}_2 + \text{H}_2\text{O}$
8.  $\text{Al} + 3 \text{O}_2 = \text{Al}_2\text{O}_3$
9.  $\text{Fe} + 3 \text{Cl}_2 = \text{FeCl}_3$
10.  $\text{KBr(aq)} + \text{Na}_2\text{CO}_3(\text{aq}) = \text{NaBr} + \text{K}_2\text{CO}_3$
11.  $\text{Ca(OH)}_2 + \text{CO}_2 = \text{Ca(HCO}_3)_2$
12.  $4 \text{Fe} + \text{O}_2 = \text{Fe}_2\text{O}_3$
13.  $\text{Ag}_2\text{S(s)} + \text{H}_2(\text{g}) = \text{Ag(s)} + \text{H}_2\text{S(g)}$
14.  $4 \text{Al}_2\text{O}_3 + \text{Fe} = 3 \text{Fe}_3\text{O}_4 + \text{Al}$
15.  $\text{NH}_3 + 5 \text{O}_2 = 6 \text{H}_2\text{O} + \text{NO}$
16.  $\text{NaHCO}_3 + \text{C}_6\text{H}_8\text{O}_7 = 3 \text{H}_2\text{O} + \text{CO}_2 + \text{Na}_3\text{C}_6\text{H}_5\text{O}_7$
17.  $2 \text{C}_6\text{H}_{14} + \text{O}_2 = 12 \text{CO}_2 + \text{H}_2\text{O}$
18.  $2 \text{C}_3\text{H}_7\text{OH} + \text{O}_2 = 6 \text{CO}_2 + \text{H}_2\text{O}$
19.  $\text{C}_5\text{H}_{12} + \text{O}_2 = \text{CO}_2 + 6 \text{H}_2\text{O}$
20.  $9 \text{Cu(NO}_3)_2 + \text{Co(NO}_3)_2 + 9 \text{Mg(NO}_3)_2 + 9 \text{Zn(NO}_3)_2 + \text{Ni(NO}_3)_2 + 50 \text{C}_2\text{H}_5\text{NO}_2 = 9 (\text{CuCoMgNiZn})\text{O}_5 + 100 \text{CO}_2 + 125 \text{H}_2\text{O} + \text{N}_2$



# ANSWERS

- $5 \text{ S}_8 + 40 \text{ H}_2\text{SO}_4 = 80 \text{ SO}_2 + 4 \text{ H}_2\text{O}$
- $2 \text{ Al} + 2 \text{ H}_3\text{PO}_4 = 3 \text{ H}_2 + 2 \text{ AlPO}_4$
- $2 \text{ KCN} + 2 \text{ H}_2\text{SO}_4 + 2 \text{ H}_2\text{O} = 2 \text{ CO} + \text{K}_2\text{SO}_4 + (\text{NH}_4)_2\text{SO}_4$
- $3 \text{ N}_2\text{H}_4 = 4 \text{ NH}_3 + \text{N}_2$
- $(\text{NH}_4)_2\text{Cr}_2\text{O}_7 = \text{Cr}_2\text{O}_3 + 4 \text{ H}_2\text{O} + \text{N}_2$
- $2 \text{ KCN} + 2 \text{ H}_2\text{SO}_4 + 2 \text{ H}_2\text{O} = 2 \text{ CO} + \text{K}_2\text{SO}_4 + (\text{NH}_4)_2\text{SO}_4$
- $\text{Zn} + 2 \text{ H}_2\text{SO}_4 = \text{ZnSO}_4 + \text{SO}_2 + 2 \text{ H}_2\text{O}$
- $4 \text{ Al} + 3 \text{ O}_2 = 2 \text{ Al}_2\text{O}_3$
- $2 \text{ Fe} + 3 \text{ Cl}_2 = 2 \text{ FeCl}_3$
- $2 \text{ KBr(aq)} + \text{Na}_2\text{CO}_3(\text{aq}) = 2 \text{ NaBr} + \text{K}_2\text{CO}_3$
- $\text{Ca(OH)}_2 + 2 \text{ CO}_2 = \text{Ca(HCO}_3)_2$
- $4 \text{ Fe} + 3 \text{ O}_2 = 2 \text{ Fe}_2\text{O}_3$
- $\text{Ag}_2\text{S(s)} + \text{H}_2(\text{g}) = 2 \text{ Ag(s)} + \text{H}_2\text{S(g)}$
- $4 \text{ Al}_2\text{O}_3 + 9 \text{ Fe} = 3 \text{ Fe}_3\text{O}_4 + 8 \text{ Al}$
- $4 \text{ NH}_3 + 5 \text{ O}_2 = 6 \text{ H}_2\text{O} + 4 \text{ NO}$
- $3 \text{ NaHCO}_3 + \text{C}_6\text{H}_8\text{O}_7 = 3 \text{ H}_2\text{O} + 3 \text{ CO}_2 + \text{Na}_3\text{C}_6\text{H}_5\text{O}_7$
- $2 \text{ C}_6\text{H}_{14} + 19 \text{ O}_2 = 12 \text{ CO}_2 + 14 \text{ H}_2\text{O}$
- $2 \text{ C}_3\text{H}_7\text{OH} + 9 \text{ O}_2 = 6 \text{ CO}_2 + 8 \text{ H}_2\text{O}$
- $\text{C}_5\text{H}_{12} + 8 \text{ O}_2 = 5 \text{ CO}_2 + 6 \text{ H}_2\text{O}$
- $9 \text{ Cu(NO}_3)_2 + 9 \text{ Co(NO}_3)_2 + 9 \text{ Mg(NO}_3)_2 + 9 \text{ Zn(NO}_3)_2 + 9 \text{ Ni(NO}_3)_2 + 50 \text{ C}_2\text{H}_5\text{NO}_2 = 9$   
 $(\text{CuCoMgNiZn})\text{O}_5 + 100 \text{ CO}_2 + 125 \text{ H}_2\text{O} + 70 \text{ N}_2$



Thanks for downloading our free printable.

We have thousands of such resources in our blog for teachers and parents.

**You can download them for free here!**

### **Free Printables from Go Science Girls – Fair Usage Policy**

#### **You can ...**

- Download and save this free printable from [gosciencegirls.com](http://gosciencegirls.com) to your computer.
- Print this file and use it as many times as you want in your home, classrooms or for your library.
- Feel free to link our blog post where your visitors can find and download this printable for free.
- When you post online about this resource – please give due credit to [gosciencegirls.com](http://gosciencegirls.com)

#### **You Cannot ...**

- Access this file or download it from other sites apart from [gosciencegirls.com](http://gosciencegirls.com)
- Other websites cannot link to this pdf directly. If required, they are welcomed to link to the blog post from where this pdf can be downloaded.
- The ownership of this pdf rests with GoScienceGirls. No one can claim ownership for this file.
- You are not allowed to sell printed copies of this file to others.
- You are not allowed to store this file electronically and redistribute it (only personal use is allowed).

### **Further Questions?**

Feel free to email us at [contactgosciencegirls@gmail.com](mailto:contactgosciencegirls@gmail.com) for any further questions and suggestions. We would love to hear from you. We promise to respond back as soon as we can.