



## BALANCE THE GIVEN CHEMICAL EQUATIONS

### Worksheet - 61

1. \_\_\_\_  $\text{HCl} + \text{Ti}(\text{HCO}_3)_3 = \text{TiCl}_3 + 3 \text{H}_2\text{O} + \text{____} \text{CO}_2$
2.  $3 \text{Cu} + \text{____} \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + \text{____} \text{NO} + 4 \text{H}_2\text{O}$
3.  $2 \text{CH}_3\text{CH}_3 + \text{____} \text{O}_2 = 4 \text{CO}_2 + \text{____} \text{H}_2\text{O}$
4.  $\text{H}_2\text{S} + 8 \text{Br} + \text{____} \text{H}_2\text{O} = \text{H}_2\text{SO}_4 + \text{____} \text{HBr}$
5.  $\text{Mn}(\text{OH})_2 + \text{____} \text{HPO}_3 = \text{Mn}(\text{PO}_3)_2 + \text{____} \text{H}_2\text{O}$
6.  $\text{N}_2\text{O}_5 + \text{____} \text{NaOH} = \text{____} \text{NaNO}_3 + \text{H}_2\text{O}$
7.  $\text{FeCl}_3 + \text{____} \text{KOH} = \text{Fe}(\text{OH})_3 + \text{____} \text{KCl}$
8. \_\_\_\_  $\text{C}_2\text{H}_6 + 7 \text{O}_2 = \text{____} \text{CO}_2 + 6 \text{H}_2\text{O}$
9. \_\_\_\_  $\text{SO}_2 + \text{O}_2 = \text{____} \text{SO}_3$
10. \_\_\_\_  $\text{C}_3\text{H}_8\text{O} + 9 \text{O}_2 = 6 \text{CO}_2 + \text{____} \text{H}_2\text{O}$
11.  $2 \text{C}_8\text{H}_{18} + \text{____} \text{O}_2 = 16 \text{CO}_2 + \text{____} \text{H}_2\text{O}$
12. \_\_\_\_  $\text{H}_2 + \text{Fe}_2\text{O}_3 = \text{____} \text{Fe} + 3 \text{H}_2\text{O}$
13.  $\text{Fe}_2\text{O}_3 + \text{____} \text{CO} = 2 \text{Fe} + \text{____} \text{CO}_2$
14.  $\text{CS}_2 + \text{____} \text{O}_2 = \text{CO}_2 + \text{____} \text{SO}_2$
15.  $\text{Cr}_2\text{O}_3(\text{s}) + \text{____} \text{H}_2(\text{g}) = 2 \text{Cr}(\text{s}) + \text{____} \text{H}_2\text{O}(\text{g})$
16. \_\_\_\_  $\text{SnCl}_4 + 4 (\text{NH}_4)_3\text{PO}_4 = \text{Sn}_3(\text{PO}_4)_4 + \text{____} \text{NH}_4\text{Cl}$
17. \_\_\_\_  $\text{LiCl} = \text{____} \text{Li} + \text{Cl}_2$
18. \_\_\_\_  $\text{NaOH} + \text{H}_2\text{SO}_4 = \text{Na}_2\text{SO}_4 + \text{____} \text{H}_2\text{O}$
19.  $4 \text{Al} + \text{____} \text{O}_2 = \text{____} \text{Al}_2\text{O}_3$
20. \_\_\_\_  $\text{CO}_2 + 20 \text{KOH} = \text{____} \text{KCO}_3 + \text{H}_2\text{O}$



# ANSWERS

1.  $3 \text{HCl} + \text{Ti}(\text{HCO}_3)_3 = \text{TiCl}_3 + 3 \text{H}_2\text{O} + 3 \text{CO}_2$
2.  $3 \text{Cu} + 8 \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + 2 \text{NO} + 4 \text{H}_2\text{O}$
3.  $2 \text{CH}_3\text{CH}_3 + 7 \text{O}_2 = 4 \text{CO}_2 + 6 \text{H}_2\text{O}$
4.  $\text{H}_2\text{S} + 8 \text{Br} + 4 \text{H}_2\text{O} = \text{H}_2\text{SO}_4 + 8 \text{HBr}$
5.  $\text{Mn}(\text{OH})_2 + 2 \text{HPO}_3 = \text{Mn}(\text{PO}_3)_2 + 2 \text{H}_2\text{O}$
6.  $\text{N}_2\text{O}_5 + 2 \text{NaOH} = 2 \text{NaNO}_3 + \text{H}_2\text{O}$
7.  $\text{FeCl}_3 + 3 \text{KOH} = \text{Fe}(\text{OH})_3 + 3 \text{KCl}$
8.  $2 \text{C}_2\text{H}_6 + 7 \text{O}_2 = 4 \text{CO}_2 + 6 \text{H}_2\text{O}$
9.  $2 \text{SO}_2 + \text{O}_2 = 2 \text{SO}_3$
10.  $2 \text{C}_3\text{H}_8\text{O} + 9 \text{O}_2 = 6 \text{CO}_2 + 8 \text{H}_2\text{O}$
11.  $2 \text{C}_8\text{H}_{18} + 25 \text{O}_2 = 16 \text{CO}_2 + 18 \text{H}_2\text{O}$
12.  $3 \text{H}_2 + \text{Fe}_2\text{O}_3 = 2 \text{Fe} + 3 \text{H}_2\text{O}$
13.  $\text{Fe}_2\text{O}_3 + 3 \text{CO} = 2 \text{Fe} + 3 \text{CO}_2$
14.  $\text{CS}_2 + 3 \text{O}_2 = \text{CO}_2 + 2 \text{SO}_2$
15.  $\text{Cr}_2\text{O}_3(\text{s}) + 3 \text{H}_2(\text{g}) = 2 \text{Cr}(\text{s}) + 3 \text{H}_2\text{O}(\text{g})$
16.  $3 \text{SnCl}_4 + 4 (\text{NH}_4)_3\text{PO}_4 = \text{Sn}_3(\text{PO}_4)_4 + 12 \text{NH}_4\text{Cl}$
17.  $2 \text{LiCl} = 2 \text{Li} + \text{Cl}_2$
18.  $2 \text{NaOH} + \text{H}_2\text{SO}_4 = \text{Na}_2\text{SO}_4 + 2 \text{H}_2\text{O}$
19.  $4 \text{Al} + 3 \text{O}_2 = 2 \text{Al}_2\text{O}_3$
20.  $20 \text{CO}_2 + 20 \text{KOH} = 20 \text{KCO}_3 + \text{H}_2\text{O}$



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