



## BALANCE THE GIVEN CHEMICAL EQUATIONS

### Worksheet - 77

1. \_\_\_\_  $\text{Ca}(\text{NO}_3)_2 + 2 \text{K}_3\text{PO}_4 = \text{Ca}_3(\text{PO}_4)_2 + \text{KNO}_3$
2.  $2 \text{CoBr}_3 + \text{K}_2\text{S} = \text{Co}_2\text{S}_3 + \text{KBr}$
3.  $\text{PTCl}_4 + \text{XEF}_2 = \text{PTF}_6 + \text{ClF} + 5 \text{XE}$
4. \_\_\_\_  $\text{CrCl}_3 + 3 \text{H}_2\text{O}_2 + 10 \text{NaOH} = \text{Na}_2\text{CrO}_4 + 6 \text{NaCl} + 8 \text{H}_2\text{O}$
5. \_\_\_\_  $\text{HClO}_4 + \text{P}_4\text{O}_{10} = \text{H}_3\text{PO}_4 + 6 \text{Cl}_2\text{O}_7$
6.  $2 \text{GaBr}_3 + \text{Na}_2\text{SO}_3 = \text{Ga}_2(\text{SO}_3)_3 + \text{NaBr}$
7. \_\_\_\_  $\text{AgNO}_3 + \text{AlI}_3 = \text{AgI} + \text{Al}(\text{NO}_3)_3$
8. \_\_\_\_  $\text{KClO}_3(\text{s}) = \text{KCl}(\text{s}) + 3 \text{O}_2(\text{g})$
9. \_\_\_\_  $\text{C}_4\text{H}_8\text{O} + 11 \text{O}_2 = 8 \text{CO}_2 + \text{H}_2\text{O}$
10.  $\text{P}_4 + \text{O}_5 + 6 \text{H}_2\text{O} = \text{H}_3\text{PO}_4$
11.  $\text{Pb}(\text{OH})_4 + \text{Cu}_2\text{O} = \text{PbO}_2 + \text{CuOH}$
12.  $\text{Fe}_2\text{O}_3 + \text{CO} = 2 \text{Fe} + \text{CO}_2$
13. \_\_\_\_  $\text{H}_2(\text{g}) + \text{P}_4(\text{s}) = \text{PH}_3(\text{g})$
14. \_\_\_\_  $\text{LiOH} + \text{H}_3\text{PO}_4 = \text{Li}_3\text{PO}_4 + \text{H}_2\text{O}$
15.  $2 \text{KMnO}_4 + \text{HCl} = \text{KCl} + 2 \text{MnCl}_2 + 8 \text{H}_2\text{O} + 5 \text{Cl}_2$
16. \_\_\_\_  $\text{NH}_3 + 5 \text{O}_2 = 4 \text{NO} + \text{H}_2\text{O}$
17.  $2 \text{K}_3\text{PO}_4 + \text{Ba}(\text{NO}_3)_2 = \text{KNO}_3 + \text{Ba}_3(\text{PO}_4)_2$
18. \_\_\_\_  $\text{KI} + 8 \text{HNO}_3 = \text{I}_2 + 6 \text{KNO}_3 + 2 \text{NO} + 4 \text{H}_2\text{O}$
19.  $2 \text{CH}_3\text{CH}_3 + \text{O}_2 = 4 \text{CO}_2 + \text{H}_2\text{O}$
20. \_\_\_\_  $\text{CaC}_2 + 2 \text{Na}_3\text{P} = \text{Ca}_3\text{P}_2 + \text{C}_2\text{Na}_2$



# ANSWERS

1.  $3 \text{Ca}(\text{NO}_3)_2 + 2 \text{K}_3\text{PO}_4 = \text{Ca}_3(\text{PO}_4)_2 + 6 \text{KNO}_3$
2.  $2 \text{CoBr}_3 + 3 \text{K}_2\text{S} = \text{Co}_2\text{S}_3 + 6 \text{KBr}$
3.  $\text{PTCl}_4 + 5 \text{XEF}_2 = \text{PTF}_6 + 4 \text{ClF} + 5 \text{XE}$
4.  $2 \text{CrCl}_3 + 3 \text{H}_2\text{O}_2 + 10 \text{NaOH} = 2 \text{Na}_2\text{CrO}_4 + 6 \text{NaCl} + 8 \text{H}_2\text{O}$
5.  $12 \text{HClO}_4 + \text{P}_4\text{O}_{10} = 4 \text{H}_3\text{PO}_4 + 6 \text{Cl}_2\text{O}_7$
6.  $2 \text{GaBr}_3 + 3 \text{Na}_2\text{SO}_3 = \text{Ga}_2(\text{SO}_3)_3 + 6 \text{NaBr}$
7.  $3 \text{AgNO}_3 + \text{AlI}_3 = 3 \text{AgI} + \text{Al}(\text{NO}_3)_3$
8.  $2 \text{KClO}_3(\text{s}) = 2 \text{KCl}(\text{s}) + 3 \text{O}_2(\text{g})$
9.  $2 \text{C}_4\text{H}_8\text{O} + 11 \text{O}_2 = 8 \text{CO}_2 + 8 \text{H}_2\text{O}$
10.  $\text{P}_4 + 2 \text{O}_5 + 6 \text{H}_2\text{O} = 4 \text{H}_3\text{PO}_4$
11.  $\text{Pb}(\text{OH})_4 + 2 \text{Cu}_2\text{O} = \text{PbO}_2 + 4 \text{CuOH}$
12.  $\text{Fe}_2\text{O}_3 + 3 \text{CO} = 2 \text{Fe} + 3 \text{CO}_2$
13.  $6 \text{H}_2(\text{g}) + \text{P}_4(\text{s}) = 4 \text{PH}_3(\text{g})$
14.  $3 \text{LiOH} + \text{H}_3\text{PO}_4 = \text{Li}_3\text{PO}_4 + 3 \text{H}_2\text{O}$
15.  $2 \text{KMNO}_4 + 16 \text{HCl} = 2 \text{KCl} + 2 \text{MnCl}_2 + 8 \text{H}_2\text{O} + 5 \text{Cl}_2$
16.  $4 \text{NH}_3 + 5 \text{O}_2 = 4 \text{NO} + 6 \text{H}_2\text{O}$
17.  $2 \text{K}_3\text{PO}_4 + 3 \text{Ba}(\text{NO}_3)_2 = 6 \text{KNO}_3 + \text{Ba}_3(\text{PO}_4)_2$
18.  $6 \text{KI} + 8 \text{HNO}_3 = 3 \text{I}_2 + 6 \text{KNO}_3 + 2 \text{NO} + 4 \text{H}_2\text{O}$
19.  $2 \text{CH}_3\text{CH}_3 + 7 \text{O}_2 = 4 \text{CO}_2 + 6 \text{H}_2\text{O}$
20.  $3 \text{CaC}_2 + 2 \text{Na}_3\text{P} = \text{Ca}_3\text{P}_2 + 3 \text{C}_2\text{Na}_2$



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