



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 83

- $2 \text{Ca}_3(\text{PO}_4)_2 + \text{SiO}_2 + 10 \text{C} = 6 \text{CaSiO}_3 + \text{CO} + \text{P}_4$
- $\text{LiAlH}_4(\text{s}) + \text{AlCl}_3(\text{s}) = \text{AlH}_3(\text{s}) + 3 \text{LiCl}(\text{s})$
- $\text{AgNO}_3 + \text{CuCl}_2 = \text{AgCl} + \text{Cu}(\text{NO}_3)_2$
- $\text{NH}_4\text{Cl} + \text{Ca}(\text{OH})_2 = \text{CaCl}_2 + 2 \text{NH}_3 + \text{H}_2\text{O}$
- $2 \text{Fe} + \text{H}_2\text{SO}_4 = \text{Fe}_2(\text{SO}_4)_3 + \text{H}_2$
- $\text{Cu} + \text{KOH} = \text{Cu}(\text{OH})_2 + \text{K}$
- $\text{Cu} + 8 \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + 2 \text{NO} + \text{H}_2\text{O}$
- $\text{ZnS} + 4 \text{O}_2 = \text{ZnO} + \text{S}_8$
- $\text{H}_2\text{O} + \text{I}_2 + 15 \text{Na}_2\text{SO}_4 = \text{HIO}_3 + 15 \text{Na}_2\text{S}$
- $\text{Cr}_2\text{O}_3 + \text{K} = 2 \text{Cr} + \text{K}_2\text{O}$
- $\text{AlCl}_3(\text{s}) + \text{Ca}_3\text{N}_2(\text{s}) = 2 \text{AlN}(\text{s}) + \text{CaCl}_2(\text{s})$
- $\text{Si}(\text{s}) + \text{HF}(\text{aq}) = \text{SiF}_4(\text{g}) + \text{H}_2(\text{g})$
- $\text{HCl} + 3 \text{As}_2\text{O}_3 + 4 \text{NaNO}_3 + 7 \text{H}_2\text{O} = \text{NO} + 6 \text{H}_3\text{AsO}_4 + 4 \text{NaCl}$
- $\text{C}_6\text{H}_6(\text{l}) + 15 \text{O}_2(\text{g}) = \text{CO}_2(\text{g}) + 6 \text{H}_2\text{O}(\text{g})$
- $\text{B}_2\text{O}_3 + \text{HF} = 2 \text{BF}_3 + \text{H}_2\text{O}$
- $\text{MgNH}_4\text{PO}_4 = \text{Mg}_2\text{P}_2\text{O}_7 + \text{NH}_3 + \text{H}_2\text{O}$
- $2 \text{H}_3\text{PO}_4 + \text{Sr}(\text{OH})_2 = \text{H}_2\text{O} + \text{Sr}_3(\text{PO}_4)_2$
- $\text{CH}_3\text{CH}_3 + 7 \text{O}_2 = 4 \text{CO}_2 + \text{H}_2\text{O}$
- $4 \text{Al} + \text{O}_2 = \text{Al}_2\text{O}_3$
- $(\text{NH}_4)_2\text{S}(\text{aq}) + 2 \text{SrCl}_2(\text{aq}) = \text{NH}_4\text{Cl}(\text{aq}) + \text{Sr}_2\text{S}_2(\text{s})$



ANSWERS

1. $2 \text{Ca}_3(\text{PO}_4)_2 + 6 \text{SiO}_2 + 10 \text{C} = 6 \text{CaSiO}_3 + 10 \text{CO} + \text{P}_4$
2. $3 \text{LiAlH}_4(\text{s}) + \text{AlCl}_3(\text{s}) = 4 \text{AlH}_3(\text{s}) + 3 \text{LiCl}(\text{s})$
3. $2 \text{AgNO}_3 + \text{CuCl}_2 = 2 \text{AgCl} + \text{Cu}(\text{NO}_3)_2$
4. $2 \text{NH}_4\text{Cl} + \text{Ca}(\text{OH})_2 = \text{CaCl}_2 + 2 \text{NH}_3 + 2 \text{H}_2\text{O}$
5. $2 \text{Fe} + 3 \text{H}_2\text{SO}_4 = \text{Fe}_2(\text{SO}_4)_3 + 3 \text{H}_2$
6. $\text{Cu} + 2 \text{KOH} = \text{Cu}(\text{OH})_2 + 2 \text{K}$
7. $3 \text{Cu} + 8 \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + 2 \text{NO} + 4 \text{H}_2\text{O}$
8. $8 \text{ZnS} + 4 \text{O}_2 = 8 \text{ZnO} + \text{S}_8$
9. $\text{H}_2\text{O} + 10 \text{I}_2 + 15 \text{Na}_2\text{SO}_4 = 20 \text{HIO}_3 + 15 \text{Na}_2\text{S}$
10. $\text{Cr}_2\text{O}_3 + 6 \text{K} = 2 \text{Cr} + 3 \text{K}_2\text{O}$
11. $2 \text{AlCl}_3(\text{s}) + \text{Ca}_3\text{N}_2(\text{s}) = 2 \text{AlN}(\text{s}) + 3 \text{CaCl}_2(\text{s})$
12. $\text{Si}(\text{s}) + 4 \text{HF}(\text{aq}) = \text{SiF}_4(\text{g}) + 2 \text{H}_2(\text{g})$
13. $4 \text{HCl} + 3 \text{As}_2\text{O}_3 + 4 \text{NaNO}_3 + 7 \text{H}_2\text{O} = 4 \text{NO} + 6 \text{H}_3\text{AsO}_4 + 4 \text{NaCl}$
14. $2 \text{C}_6\text{H}_6(\text{l}) + 15 \text{O}_2(\text{g}) = 12 \text{CO}_2(\text{g}) + 6 \text{H}_2\text{O}(\text{g})$
15. $\text{B}_2\text{O}_3 + 6 \text{HF} = 2 \text{BF}_3 + 3 \text{H}_2\text{O}$
16. $2 \text{MgNH}_4\text{PO}_4 = \text{Mg}_2\text{P}_2\text{O}_7 + 2 \text{NH}_3 + \text{H}_2\text{O}$
17. $2 \text{H}_3\text{PO}_4 + 3 \text{Sr}(\text{OH})_2 = 6 \text{H}_2\text{O} + \text{Sr}_3(\text{PO}_4)_2$
18. $2 \text{CH}_3\text{CH}_3 + 7 \text{O}_2 = 4 \text{CO}_2 + 6 \text{H}_2\text{O}$
19. $4 \text{Al} + 3 \text{O}_2 = 2 \text{Al}_2\text{O}_3$
20. $2 (\text{NH}_4)_2\text{S}(\text{aq}) + 2 \text{SrCl}_2(\text{aq}) = 4 \text{NH}_4\text{Cl}(\text{aq}) + \text{Sr}_2\text{S}_2(\text{s})$



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