



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 36

- $\text{Al}(\text{OH})_3 + \text{HNO}_3 = \text{Al}(\text{NO}_3)_3 + 3 \text{H}_2\text{O}$
- $\text{Mg}_3\text{N}_2 + \text{H}_2\text{SO}_4 = \text{MgSO}_4 + (\text{NH}_4)_2\text{SO}_4$
- $4 \text{Mn}(\text{OH})_3 + \text{H}_4\text{P}_2\text{O}_5 = \text{Mn}_4(\text{P}_2\text{O}_5)_3 + \text{H}_2\text{O}$
- $\text{K}_2\text{SO}_4(\text{aq}) + \text{NaOH}(\text{aq}) = \text{K}_2(\text{OH})_2(\text{s}) + \text{Na}_2(\text{SO}_4)(\text{aq})$
- $2 \text{Al}(\text{OH})_3 + \text{H}_2\text{SO}_4 = \text{Al}_2(\text{SO}_4)_3 + \text{H}_2\text{O}$
- $3 \text{Zn}(\text{OH})_2 + \text{H}_3\text{PO}_4 = \text{Zn}_3(\text{PO}_4)_2 + \text{H}_2\text{O}$
- $16 \text{H}_2\text{S} + \text{SO}_2 = 3 \text{S}_8 + \text{H}_2\text{O}$
- $2 \text{KOH} + \text{H}_2\text{SO}_4 = \text{H}_2\text{O} + \text{K}_2\text{SO}_4$
- $\text{NaF} + \text{CuCl}_2 = \text{CuF}_2 + \text{NaCl}$
- $\text{Al}_2\text{O}_3(\text{s}) + \text{NaOH}(\text{l}) + 12 \text{HF}(\text{g}) = 2 \text{Na}_3\text{AlF}_6 + \text{H}_2\text{O}(\text{g})$
- $3 \text{PbF}_2 + \text{PCl}_3 = 2 \text{PF}_3 + \text{PbCl}_2$
- $\text{Cr}(\text{NO}_2)_2 + (\text{NH}_4)_2\text{SO}_4 = \text{CrSO}_4 + \text{NH}_4\text{NO}_2$
- $5 \text{Fe}_3(\text{PO}_4)_2 + \text{NaMnO}_4 + 8 \text{H}_3\text{PO}_4 = \text{FePO}_4 + \text{Na}_3\text{PO}_4 + \text{Mn}_3(\text{PO}_4)_2 + 12 \text{H}_2\text{O}$
- $\text{PB}(\text{CH}_3\text{COO})_2 + \text{KI} = \text{PBI}_2 + \text{CH}_3\text{COOK}$
- $2 \text{Ni}_2\text{O}_3(\text{s}) = \text{Ni}(\text{s}) + 3 \text{O}_2(\text{g})$
- $4 \text{H}_2\text{SiCl}_2 + \text{H}_2\text{O} = \text{H}_8\text{Si}_4\text{O}_4 + 8 \text{HCl}$
- $12 \text{HClO}_4 + \text{P}_4\text{O}_{10} = \text{H}_3\text{PO}_4 + 6 \text{Cl}_2\text{O}_7$
- $3 \text{Br}_2 + \text{NaOH} = \text{NaBr} + \text{NaBrO}_3 + 3 \text{H}_2\text{O}$
- $(\text{NH}_4)_2\text{Cr}_2\text{O}_7 = \text{Cr}_2\text{O}_3 + \text{H}_2\text{O} + \text{N}_2$
- $2 \text{Al}(\text{NO}_3)_3 + \text{H}_2\text{SO}_4 = \text{Al}_2(\text{SO}_4)_3 + \text{HNO}_3$



ANSWERS

1. $\text{Al}(\text{OH})_3 + 3 \text{HNO}_3 = \text{Al}(\text{NO}_3)_3 + 3 \text{H}_2\text{O}$
2. $\text{Mg}_3\text{N}_2 + 4 \text{H}_2\text{SO}_4 = 3 \text{MgSO}_4 + (\text{NH}_4)_2\text{SO}_4$
3. $4 \text{Mn}(\text{OH})_3 + 3 \text{H}_4\text{P}_2\text{O}_5 = \text{Mn}_4(\text{P}_2\text{O}_5)_3 + 12 \text{H}_2\text{O}$
4. $\text{K}_2\text{SO}_4(\text{aq}) + 2 \text{NaOH}(\text{aq}) = \text{K}_2(\text{OH})_2(\text{s}) + \text{Na}_2(\text{SO}_4)(\text{aq})$
5. $2 \text{Al}(\text{OH})_3 + 3 \text{H}_2\text{SO}_4 = \text{Al}_2(\text{SO}_4)_3 + 6 \text{H}_2\text{O}$
6. $3 \text{Zn}(\text{OH})_2 + 2 \text{H}_3\text{PO}_4 = \text{Zn}_3(\text{PO}_4)_2 + 6 \text{H}_2\text{O}$
7. $16 \text{H}_2\text{S} + 8 \text{SO}_2 = 3 \text{S}_8 + 16 \text{H}_2\text{O}$
8. $2 \text{KOH} + \text{H}_2\text{SO}_4 = 2 \text{H}_2\text{O} + \text{K}_2\text{SO}_4$
9. $2 \text{NaF} + \text{CuCl}_2 = \text{CuF}_2 + 2 \text{NaCl}$
10. $\text{Al}_2\text{O}_3(\text{s}) + 6 \text{NaOH}(\text{l}) + 12 \text{HF}(\text{g}) = 2 \text{Na}_3\text{AlF}_6 + 9 \text{H}_2\text{O}(\text{g})$
11. $3 \text{PbF}_2 + 2 \text{PCl}_3 = 2 \text{PF}_3 + 3 \text{PbCl}_2$
12. $\text{Cr}(\text{NO}_2)_2 + (\text{NH}_4)_2\text{SO}_4 = \text{CrSO}_4 + 2 \text{NH}_4\text{NO}_2$
13. $5 \text{Fe}_3(\text{PO}_4)_2 + 3 \text{NaMnO}_4 + 8 \text{H}_3\text{PO}_4 = 15 \text{FePO}_4 + \text{Na}_3\text{PO}_4 + \text{Mn}_3(\text{PO}_4)_2 + 12 \text{H}_2\text{O}$
14. $\text{PB}(\text{CH}_3\text{COO})_2 + 2 \text{KI} = \text{PBI}_2 + 2 \text{CH}_3\text{COOK}$
15. $2 \text{Ni}_2\text{O}_3(\text{s}) = 4 \text{Ni}(\text{s}) + 3 \text{O}_2(\text{g})$
16. $4 \text{H}_2\text{SiCl}_2 + 4 \text{H}_2\text{O} = \text{H}_8\text{Si}_4\text{O}_4 + 8 \text{HCl}$
17. $12 \text{HClO}_4 + \text{P}_4\text{O}_{10} = 4 \text{H}_3\text{PO}_4 + 6 \text{Cl}_2\text{O}_7$
18. $3 \text{Br}_2 + 6 \text{NaOH} = 5 \text{NaBr} + \text{NaBrO}_3 + 3 \text{H}_2\text{O}$
19. $(\text{NH}_4)_2\text{Cr}_2\text{O}_7 = \text{Cr}_2\text{O}_3 + 4 \text{H}_2\text{O} + \text{N}_2$
20. $2 \text{Al}(\text{NO}_3)_3 + 3 \text{H}_2\text{SO}_4 = \text{Al}_2(\text{SO}_4)_3 + 6 \text{HNO}_3$



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