



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 31

- $\text{BaCl}_2(\text{aq}) + \text{ ______ } \text{AgNO}_3(\text{aq}) = \text{ ______ } \text{AgCl}(\text{s}) + \text{ ______ } \text{Ba}(\text{NO}_3)_2(\text{aq})$
- $\text{ ______ } \text{K} + \text{H}_2\text{SO}_3 = \text{K}_2\text{SO}_3 + \text{H}_2$
- $\text{BH}_3 + \text{ ______ } \text{H}_2\text{O} = \text{B}(\text{OH})_3 + 3 \text{H}_2$
- $2 \text{Si}_4\text{H}_{10} + 13 \text{O}_2 = 8 \text{SiO}_2 + \text{ ______ } \text{H}_2\text{O}$
- $\text{ ______ } \text{HF} + \text{Al}(\text{OH})_3 = \text{AlF}_3 + 3 \text{H}_2\text{O}$
- $\text{ ______ } \text{MnO}_4^{\{-\}} + 13 \text{C}_2\text{O}_4^{\{-\}} + 16 \text{H}^{\{+\}} = \text{Mn}_2^{\{+\}} + 26 \text{CO}_2 + \text{ ______ } \text{H}_2\text{O}$
- $\text{KAl}(\text{SO}_4)_2 + \text{ ______ } \text{BaCl} = \text{KAlCl}_2 + \text{ ______ } \text{BaSO}_4$
- $\text{P}_4 + 4 \text{NaOH} + \text{ ______ } \text{H}_2\text{O} = 2 \text{PH}_3 + \text{ ______ } \text{Na}_2\text{HPO}_3$
- $\text{ ______ } \text{Zn} + \text{Cr}_2\text{O}_7^{\{2-\}} + 14 \text{H}^{\{+\}} = 3 \text{Zn}^{\{2+\}} + \text{ ______ } \text{Cr}^{\{3+\}} + 7 \text{H}_2\text{O}$
- $\text{ ______ } \text{Fe} + 3 \text{O}_2 = \text{ ______ } \text{Fe}_2\text{O}_3$
- $\text{Al}_2\text{S}_3 + \text{ ______ } \text{H}_2\text{O} = 2 \text{Al}(\text{OH})_3 + 3 \text{H}_2\text{S}$
- $\text{K}_4(\text{Fe}(\text{CN})_6) + \text{ ______ } \text{FeSO}_4 + 24 \text{H}_2\text{O}_2 = \text{ ______ } \text{K}_2(\text{SO}_4) + 3 \text{Fe}_2(\text{SO}_4) + 6 \text{NO}_2 + 6 \text{CO}_2 + 24 \text{H}_2\text{O}$
- $\text{K}_2\text{SO}_4 + \text{SR}(\text{NO}_3)_2 = \text{SRSO}_4 + \text{ ______ } \text{KNO}_3$
- $\text{Cl}_2 + 2 \text{KBr} = \text{Br}_2 + \text{ ______ } \text{KCl}$
- $\text{RuCl}_3 \cdot 3\text{H}_2\text{O} = \text{Ru} + \text{ ______ } \text{Cl} + 3 \text{H}_2\text{O}$
- $\text{K}_2\text{Cr}_2\text{O}_7 + \text{ ______ } \text{HCl} = 2 \text{KCl} + \text{ ______ } \text{CrCl}_3 + 7 \text{H}_2\text{O} + 3 \text{Cl}_2$
- $\text{PB}(\text{NO}_3)_2(\text{aq}) + \text{ ______ } \text{HCl}(\text{aq}) = \text{PBCl}_2(\text{s}) + \text{ ______ } \text{HNO}_3(\text{aq})$
- $4 \text{HCl} + 3 \text{As}_2\text{O}_3 + \text{ ______ } \text{NaNO}_3 + 7 \text{H}_2\text{O} = \text{ ______ } \text{NO} + 6 \text{H}_3\text{AsO}_4 + 4 \text{NaCl}$
- $\text{ ______ } \text{Mg} + \text{N}_2 = \text{Mg}_3\text{N}_2$
- $3 \text{AgNO}_3(\text{aq}) + \text{AlI}_3(\text{aq}) = \text{ ______ } \text{AgI}(\text{s}) + \text{Al}(\text{NO}_3)_3(\text{aq})$



ANSWERS

1. $\text{BaCl}_2(\text{aq}) + 2 \text{AgNO}_3(\text{aq}) = 2 \text{AgCl}(\text{s}) + \text{Ba}(\text{NO}_3)_2(\text{aq})$
2. $2 \text{K} + \text{H}_2\text{SO}_3 = \text{K}_2\text{SO}_3 + \text{H}_2$
3. $\text{BH}_3 + 3 \text{H}_2\text{O} = \text{B}(\text{OH})_3 + 3 \text{H}_2$
4. $2 \text{Si}_4\text{H}_{10} + 13 \text{O}_2 = 8 \text{SiO}_2 + 10 \text{H}_2\text{O}$
5. $3 \text{HF} + \text{Al}(\text{OH})_3 = \text{AlF}_3 + 3 \text{H}_2\text{O}$
6. $2 \text{MnO}_4^{-} + 13 \text{C}_2\text{O}_4^{2-} + 16 \text{H}^{+} = \text{Mn}_2^{+} + 26 \text{CO}_2 + 8 \text{H}_2\text{O}$
7. $\text{KAl}(\text{SO}_4)_2 + 2 \text{BaCl} = \text{KAlCl}_2 + 2 \text{BaSO}_4$
8. $\text{P}_4 + 4 \text{NaOH} + 2 \text{H}_2\text{O} = 2 \text{PH}_3 + 2 \text{Na}_2\text{HPO}_3$
9. $3 \text{Zn} + \text{Cr}_2\text{O}_7^{2-} + 14 \text{H}^{+} = 3 \text{Zn}^{2+} + 2 \text{Cr}^{3+} + 7 \text{H}_2\text{O}$
10. $4 \text{Fe} + 3 \text{O}_2 = 2 \text{Fe}_2\text{O}_3$
11. $\text{Al}_2\text{S}_3 + 6 \text{H}_2\text{O} = 2 \text{Al}(\text{OH})_3 + 3 \text{H}_2\text{S}$
12. $\text{K}_4(\text{Fe}(\text{CN})_6) + 5 \text{FeSO}_4 + 24 \text{H}_2\text{O}_2 = 2 \text{K}_2(\text{SO}_4) + 3 \text{Fe}_2(\text{SO}_4) + 6 \text{NO}_2 + 6 \text{CO}_2 + 24 \text{H}_2\text{O}$
13. $\text{K}_2\text{SO}_4 + \text{Sr}(\text{NO}_3)_2 = \text{SrSO}_4 + 2 \text{KNO}_3$
14. $\text{Cl}_2 + 2 \text{KBr} = \text{Br}_2 + 2 \text{KCl}$
15. $\text{RuCl}_3 \cdot 3\text{H}_2\text{O} = \text{Ru} + 3 \text{Cl} + 3 \text{H}_2\text{O}$
16. $\text{K}_2\text{Cr}_2\text{O}_7 + 14 \text{HCl} = 2 \text{KCl} + 2 \text{CrCl}_3 + 7 \text{H}_2\text{O} + 3 \text{Cl}_2$
17. $\text{Pb}(\text{NO}_3)_2(\text{aq}) + 2 \text{HCl}(\text{aq}) = \text{PbCl}_2(\text{s}) + 2 \text{HNO}_3(\text{aq})$
18. $4 \text{HCl} + 3 \text{As}_2\text{O}_3 + 4 \text{NaNO}_3 + 7 \text{H}_2\text{O} = 4 \text{NO} + 6 \text{H}_3\text{AsO}_4 + 4 \text{NaCl}$
19. $3 \text{Mg} + \text{N}_2 = \text{Mg}_3\text{N}_2$
20. $3 \text{AgNO}_3(\text{aq}) + \text{AlI}_3(\text{aq}) = 3 \text{AgI}(\text{s}) + \text{Al}(\text{NO}_3)_3(\text{aq})$



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