



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 84

1. $2 (\text{NH}_4)_2\text{S}(\text{aq}) + \text{ ______ } \text{SrCl}_2(\text{aq}) = \text{ ______ } \text{NH}_4\text{Cl}(\text{aq}) + \text{Sr}_2\text{S}_2(\text{aq})$
2. $\text{S} + \text{ ______ } \text{HNO}_3 = \text{H}_2\text{SO}_4 + 6 \text{NO}_2 + \text{ ______ } \text{H}_2\text{O}$
3. $3 \text{Ba}(\text{OH})_2 + \text{ ______ } \text{H}_3\text{PO}_4 = \text{Ba}_3(\text{PO}_4)_2 + \text{ ______ } \text{H}_2\text{O}$
4. $\text{ ______ } \text{PbI}_2(\text{s}) + 8 \text{HNO}_3(\text{l}) = \text{ ______ } \text{Pb}(\text{NO}_3)_2(\text{l}) + 3 \text{I}_2(\text{s}) + 2 \text{NO}(\text{g}) + 4 \text{H}_2\text{O}(\text{l})$
5. $3 \text{Cu} + \text{ ______ } \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + \text{ ______ } \text{NO} + 4 \text{H}_2\text{O}$
6. $3 \text{Br}_2 + \text{ ______ } \text{Na}_2\text{CO}_3 = 5 \text{NaBr} + \text{NaBrO}_3 + \text{ ______ } \text{CO}_2$
7. $\text{P}_4\text{O}_{10} + \text{ ______ } \text{H}_2\text{O} = \text{ ______ } \text{H}_3\text{PO}_4$
8. $\text{ ______ } \text{KCl} + \text{H}_2\text{Cr}_2\text{O}_7 + 2 \text{NaOH} = \text{K}_2\text{Cr}_2\text{O}_7 + \text{ ______ } \text{H}_2\text{O} + 2 \text{NaCl}$
9. $2 \text{B}_2\text{O}_3 + \text{ ______ } \text{C} = \text{B}_4\text{C}_3 + \text{ ______ } \text{CO}_2$
10. $\text{ ______ } \text{AgCH}_3\text{COO} = (\text{CH}_3\text{COO})_2 + \text{ ______ } \text{Ag}$
11. $3 \text{H}_2\text{SO}_4 + \text{ ______ } \text{Al}(\text{OH})_3 = \text{ ______ } \text{H}_2\text{O} + \text{Al}_2(\text{SO}_4)_3$
12. $\text{ ______ } \text{HNO}_2 + 2 \text{KMnO}_4 + 3 \text{H}_2\text{SO}_4 = \text{ ______ } \text{MnSO}_4 + 5 \text{HNO}_3 + \text{K}_2\text{SO}_4 + 3 \text{H}_2\text{O}$
13. $2 \text{B}_5\text{H}_{11} + \text{ ______ } \text{H}_2 = \text{ ______ } \text{B}_2\text{H}_6$
14. $\text{ ______ } \text{FeC}_2\text{O}_4 \cdot 2\text{H}_2\text{O} + 3 \text{O}_2 = \text{ ______ } \text{Fe}_2\text{O}_3 + 8 \text{H}_2\text{O} + 8 \text{CO}_2$
15. $\text{ ______ } \text{HCl} + \text{MnO}_2 = \text{MnCl}_2 + \text{ ______ } \text{H}_2\text{O} + \text{Cl}_2$
16. $\text{Pb}(\text{C}_2\text{H}_5)_4 + \text{ ______ } \text{O}_2 = \text{Pb} + 8 \text{CO}_2 + \text{ ______ } \text{H}_2\text{O}$
17. $\text{Al}(\text{C}_2\text{H}_5\text{O})_3 + \text{ ______ } \text{NaOH} = \text{ ______ } \text{C}_2\text{H}_5\text{ONa} + \text{Al}(\text{OH})_3$
18. $\text{ ______ } \text{FeCr}_2\text{O}_4 + 8 \text{Na}_2\text{CO}_3 + 7 \text{O}_2 = \text{ ______ } \text{Na}_2\text{CrO}_4 + 2 \text{Fe}_2\text{O}_3 + 8 \text{CO}_2$
19. $\text{ ______ } \text{Na} + 3 \text{CO}_2 = \text{ ______ } \text{Na}_2\text{CO}_3$
20. $2 \text{Sb}_2\text{S}_3 + \text{ ______ } \text{O}_2 = \text{Sb}_4\text{O}_6 + \text{ ______ } \text{SO}_2$



ANSWERS

1. $2 (\text{NH}_4)_2\text{S}(\text{aq}) + 2 \text{SrCl}_2(\text{aq}) = 4 \text{NH}_4\text{Cl}(\text{aq}) + \text{Sr}_2\text{S}_2(\text{aq})$
2. $\text{S} + 6 \text{HNO}_3 = \text{H}_2\text{SO}_4 + 6 \text{NO}_2 + 2 \text{H}_2\text{O}$
3. $3 \text{Ba}(\text{OH})_2 + 2 \text{H}_3\text{PO}_4 = \text{Ba}_3(\text{PO}_4)_2 + 6 \text{H}_2\text{O}$
4. $3 \text{PbI}_2(\text{s}) + 8 \text{HNO}_3(\text{l}) = 3 \text{Pb}(\text{NO}_3)_2(\text{l}) + 3 \text{I}_2(\text{s}) + 2 \text{NO}(\text{g}) + 4 \text{H}_2\text{O}(\text{l})$
5. $3 \text{Cu} + 8 \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + 2 \text{NO} + 4 \text{H}_2\text{O}$
6. $3 \text{Br}_2 + 3 \text{Na}_2\text{CO}_3 = 5 \text{NaBr} + \text{NaBrO}_3 + 3 \text{CO}_2$
7. $\text{P}_4\text{O}_{10} + 6 \text{H}_2\text{O} = 4 \text{H}_3\text{PO}_4$
8. $2 \text{KCl} + \text{H}_2\text{Cr}_2\text{O}_7 + 2 \text{NaOH} = \text{K}_2\text{Cr}_2\text{O}_7 + 2 \text{H}_2\text{O} + 2 \text{NaCl}$
9. $2 \text{B}_2\text{O}_3 + 6 \text{C} = \text{B}_4\text{C}_3 + 3 \text{CO}_2$
10. $2 \text{AgCH}_3\text{COO} = (\text{CH}_3\text{COO})_2 + 2 \text{Ag}$
11. $3 \text{H}_2\text{SO}_4 + 2 \text{Al}(\text{OH})_3 = 6 \text{H}_2\text{O} + \text{Al}_2(\text{SO}_4)_3$
12. $5 \text{HNO}_2 + 2 \text{KMnO}_4 + 3 \text{H}_2\text{SO}_4 = 2 \text{MnSO}_4 + 5 \text{HNO}_3 + \text{K}_2\text{SO}_4 + 3 \text{H}_2\text{O}$
13. $2 \text{B}_5\text{H}_{11} + 4 \text{H}_2 = 5 \text{B}_2\text{H}_6$
14. $4 \text{FeC}_2\text{O}_4 \cdot 2\text{H}_2\text{O} + 3 \text{O}_2 = 2 \text{Fe}_2\text{O}_3 + 8 \text{H}_2\text{O} + 8 \text{CO}_2$
15. $4 \text{HCl} + \text{MnO}_2 = \text{MnCl}_2 + 2 \text{H}_2\text{O} + \text{Cl}_2$
16. $\text{Pb}(\text{C}_2\text{H}_5)_4 + 13 \text{O}_2 = \text{Pb} + 8 \text{CO}_2 + 10 \text{H}_2\text{O}$
17. $\text{Al}(\text{C}_2\text{H}_5\text{O})_3 + 3 \text{NaOH} = 3 \text{C}_2\text{H}_5\text{ONa} + \text{Al}(\text{OH})_3$
18. $4 \text{FeCr}_2\text{O}_4 + 8 \text{Na}_2\text{CO}_3 + 7 \text{O}_2 = 8 \text{Na}_2\text{CrO}_4 + 2 \text{Fe}_2\text{O}_3 + 8 \text{CO}_2$
19. $4 \text{Na} + 3 \text{CO}_2 = 2 \text{Na}_2\text{CO}_3$
20. $2 \text{Sb}_2\text{S}_3 + 9 \text{O}_2 = \text{Sb}_4\text{O}_6 + 6 \text{SO}_2$



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