



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 88

1. ____ $\text{HClO}_4 + \text{Cr}(\text{OH})_3 = \text{Cr}(\text{ClO}_4)_3 + \text{H}_2\text{O}$
2. ____ $\text{Na}_2\text{SO}_3 = \text{Na}_2\text{S} + \text{Na}_2\text{SO}_4$
3. $3 \text{N} + \text{H}_3 = \text{NH}_2$
4. $\text{K}_2\text{CO}_3 + \text{C}_2\text{H}_4\text{O}_2 = \text{K}(\text{C}_2\text{H}_3\text{O}_2) + \text{H}_2\text{CO}_3$
5. ____ $\text{SrCO}_3 + \text{Ti}_2 + 4 \text{O}_2 = 2 \text{Sr}_3\text{TiO}_7 + \text{CO}_2$
6. $2 \text{KMnO}_4 + 5 \text{Na}_2\text{SO}_3 + \text{H}_2\text{SO}_4 = 2 \text{MnSO}_4 + 5 \text{Na}_2\text{SO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
7. $\text{CrCl}_3 + \text{NaOH} = \text{NaCl} + \text{Cr}(\text{OH})_3$
8. $\text{K}_2\text{CO}_3 + \text{HNO}_3 = \text{KNO}_3 + \text{CO}_2 + \text{H}_2\text{O}$
9. ____ $\text{HC}_2\text{H}_3\text{O}_2(\text{aq}) + \text{K}_2\text{CO}_3(\text{aq}) = \text{H}_2\text{O}(\text{l}) + \text{CO}_2(\text{g}) + \text{KC}_2\text{H}_3\text{O}_2(\text{aq})$
10. $\text{Cu} + \text{HNO}_3 = \text{Cu}(\text{NO}_3)_2 + 2 \text{H}_2\text{O} + \text{NO}_2$
11. ____ $\text{Li} + \text{YCl}_3 = \text{Y} + \text{LiCl}$
12. ____ $\text{NH}_4\text{ClO}_4 = \text{N}_2 + \text{Cl}_2 + \text{O}_2 + 4 \text{H}_2\text{O}$
13. $2 \text{Al}(\text{NO}_3)_3 + \text{H}_2\text{SO}_4 = \text{Al}_2(\text{SO}_4)_3 + \text{HNO}_3$
14. ____ $\text{Na}_4\text{SiO}_4 + 4 \text{FeCl}_3 = \text{Fe}_4(\text{SiO}_4)_3 + \text{NaCl}$
15. $\text{NaNO}_3 + 4 \text{Zn} + \text{NaOH} = \text{NH}_3 + 4 \text{Na}_2\text{ZNO}_2 + \text{H}_2\text{O}$
16. $2 \text{BF}_3 + \text{Li}_2\text{SO}_3 = \text{B}_2(\text{SO}_3)_3 + \text{LiF}$
17. ____ $\text{BaCl}_2(\text{aq}) + 2 \text{H}_3\text{PO}_4(\text{aq}) = \text{Ba}_3(\text{PO}_4)_2(\text{s}) + \text{HCl}(\text{aq})$
18. $4 \text{C}_3\text{H}_5\text{N}_3\text{O}_9 = \text{N}_2 + 12 \text{CO}_2 + \text{H}_2\text{O} + \text{O}_2$
19. ____ $\text{HCl} + \text{As}_2\text{O}_3 + 2 \text{NaNO}_3 + \text{H}_2\text{O} = \text{NO} + 2 \text{H}_3\text{AsO}_4 + 2 \text{NaCl}_2$
20. ____ $\text{NaF}(\text{Aq}) + \text{CuCl}_2(\text{Aq}) = \text{CuF}_2(\text{Aq}) + \text{NaCl}(\text{Aq})$



ANSWERS

1. $3 \text{HClO}_4 + \text{Cr}(\text{OH})_3 = \text{Cr}(\text{ClO}_4)_3 + 3 \text{H}_2\text{O}$
2. $4 \text{Na}_2\text{SO}_3 = \text{Na}_2\text{S} + 3 \text{Na}_2\text{SO}_4$
3. $3 \text{N} + 2 \text{H}_3 = 3 \text{NH}_2$
4. $\text{K}_2\text{CO}_3 + 2 \text{C}_2\text{H}_4\text{O}_2 = 2 \text{K}(\text{C}_2\text{H}_3\text{O}_2) + \text{H}_2\text{CO}_3$
5. $6 \text{SrCO}_3 + \text{Ti}_2 + 4 \text{O}_2 = 2 \text{Sr}_3\text{TiO}_7 + 6 \text{CO}_2$
6. $2 \text{KMnO}_4 + 5 \text{Na}_2\text{SO}_3 + 3 \text{H}_2\text{SO}_4 = 2 \text{MnSO}_4 + 5 \text{Na}_2\text{SO}_4 + \text{K}_2\text{SO}_4 + 3 \text{H}_2\text{O}$
7. $\text{CrCl}_3 + 3 \text{NaOH} = 3 \text{NaCl} + \text{Cr}(\text{OH})_3$
8. $\text{K}_2\text{CO}_3 + 2 \text{HNO}_3 = 2 \text{KNO}_3 + \text{CO}_2 + \text{H}_2\text{O}$
9. $2 \text{HC}_2\text{H}_3\text{O}_2(\text{aq}) + \text{K}_2\text{CO}_3(\text{aq}) = \text{H}_2\text{O}(\text{l}) + \text{CO}_2(\text{g}) + 2 \text{KC}_2\text{H}_3\text{O}_2(\text{aq})$
10. $\text{Cu} + 4 \text{HNO}_3 = \text{Cu}(\text{NO}_3)_2 + 2 \text{H}_2\text{O} + 2 \text{NO}_2$
11. $3 \text{Li} + \text{YCl}_3 = \text{Y} + 3 \text{LiCl}$
12. $2 \text{NH}_4\text{ClO}_4 = \text{N}_2 + \text{Cl}_2 + 2 \text{O}_2 + 4 \text{H}_2\text{O}$
13. $2 \text{Al}(\text{NO}_3)_3 + 3 \text{H}_2\text{SO}_4 = \text{Al}_2(\text{SO}_4)_3 + 6 \text{HNO}_3$
14. $3 \text{Na}_4\text{SiO}_4 + 4 \text{FeCl}_3 = \text{Fe}_4(\text{SiO}_4)_3 + 12 \text{NaCl}$
15. $\text{NaNO}_3 + 4 \text{Zn} + 7 \text{NaOH} = \text{NH}_3 + 4 \text{Na}_2\text{ZnO}_2 + 2 \text{H}_2\text{O}$
16. $2 \text{BF}_3 + 3 \text{Li}_2\text{SO}_3 = \text{B}_2(\text{SO}_3)_3 + 6 \text{LiF}$
17. $3 \text{BaCl}_2(\text{aq}) + 2 \text{H}_3\text{PO}_4(\text{aq}) = \text{Ba}_3(\text{PO}_4)_2(\text{s}) + 6 \text{HCl}(\text{aq})$
18. $4 \text{C}_3\text{H}_5\text{N}_3\text{O}_9 = 6 \text{N}_2 + 12 \text{CO}_2 + 10 \text{H}_2\text{O} + \text{O}_2$
19. $4 \text{HCl} + \text{As}_2\text{O}_3 + 2 \text{NaNO}_3 + \text{H}_2\text{O} = 2 \text{NO} + 2 \text{H}_3\text{AsO}_4 + 2 \text{NaCl}_2$
20. $2 \text{NaF}(\text{Aq}) + \text{CuCl}_2(\text{Aq}) = \text{CuF}_2(\text{Aq}) + 2 \text{NaCl}(\text{Aq})$



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