



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 18

1. $\text{ZnO} + \text{C} = \text{Zn} + \text{CO}_2$
2. $\text{KMnO}_4 + 80 \text{KNO}_2 + 60 \text{HCl} = 20 \text{MnCl}_2 + \text{KCl} + 80 \text{KNO}_3 + 3 \text{H}_2\text{O}$
3. $3 \text{K}_4(\text{Fe}(\text{CN})_6) + \text{FeSO}_4 = \text{Fe}_4[\text{Fe}(\text{CN})_6]_3 + \text{K}_2\text{SO}_4 + 2 \text{Fe}$
4. $\text{K}_2\text{Cr}_2\text{O}_7 + \text{FeCl}_2 + 14 \text{HCl} = 2 \text{CrCl}_3 + \text{KCl} + 6 \text{FeCl}_3 + 7 \text{H}_2\text{O}$
5. $\text{HCl} + \text{Fe}_2\text{O}_3 = 2 \text{FeCl}_3 + \text{H}_2\text{O}$
6. $4 \text{Al} + \text{O}_2 = \text{Al}_2\text{O}_3$
7. $\text{Pb}(\text{NO}_3)_2 = \text{PbO} + 4 \text{NO}_2 + \text{O}_2$
8. $4 \text{KMnO}_4 + 10 \text{NaI} + \text{H}_2\text{SO}_4 = 5 \text{I}_2 + 4 \text{MnSO}_4 + 10 \text{NaSO}_4 + \text{K}_2\text{SO}_4 + 16 \text{H}_2\text{O}$
9. $2 \text{NaOH} + \text{H}_2\text{SO}_4 = \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$
10. $2 \text{C}_8\text{H}_{18} + \text{O}_2 = 16 \text{CO}_2 + 18 \text{H}_2\text{O}$
11. $2 \text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CHBrCOOH} + \text{K}_2\text{O} = \text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CHBrCOOK} + \text{H}_2\text{O}$
12. $2 \text{Al}(\text{OH})_3 + \text{H}_2\text{CO}_3 = \text{Al}_2(\text{CO}_3)_3 + 6 \text{H}_2\text{O}$
13. $\text{C}_2\text{H}_6\text{O} + \text{O}_2 = 2 \text{CO}_2 + \text{H}_2\text{O}$
14. $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 = \text{CO}_2 + 6 \text{H}_2\text{O}$
15. $3 \text{Cu} + \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + \text{H}_2\text{O} + 2 \text{NO}$
16. $\text{C}_5\text{H}_8\text{O}_2 + 2 \text{NaH} + \text{HCl} = \text{C}_5\text{H}_{12}\text{O}_2 + 2 \text{NaCl}$
17. $2 \text{HCl} + \text{Na}_2\text{CO}_3 = \text{NaCl} + \text{H}_2\text{O} + \text{CO}_2$
18. $\text{H}_2\text{SO}_4 + 2 \text{NaCN} = \text{HCN} + \text{Na}_2\text{SO}_4$
19. $5 \text{S}_8 + 160 \text{HNO}_3 = \text{H}_2\text{SO}_4 + 160 \text{NO}_2 + 4 \text{H}_2\text{O}$
20. $\text{HCl} + \text{Ba}(\text{OH})_2 = \text{BaCl}_2 + 2 \text{H}_2\text{O}$



ANSWERS

1. $2 \text{ZnO} + \text{C} = 2 \text{Zn} + \text{CO}_2$
2. $20 \text{KMnO}_4 + 80 \text{KNO}_2 + 60 \text{HCl} = 20 \text{MnCl}_2 + 20 \text{KCl} + 80 \text{KNO}_3 + 3 \text{H}_2\text{O}$
3. $3 \text{K}_4(\text{Fe}(\text{CN})_6) + 6 \text{FeSO}_4 = \text{Fe}_4[\text{Fe}(\text{CN})_6]_3 + 6 \text{K}_2\text{SO}_4 + 2 \text{Fe}$
4. $\text{K}_2\text{Cr}_2\text{O}_7 + 6 \text{FeCl}_2 + 14 \text{HCl} = 2 \text{CrCl}_3 + 2 \text{KCl} + 6 \text{FeCl}_3 + 7 \text{H}_2\text{O}$
5. $6 \text{HCl} + \text{Fe}_2\text{O}_3 = 2 \text{FeCl}_3 + 3 \text{H}_2\text{O}$
6. $4 \text{Al} + 3 \text{O}_2 = 2 \text{Al}_2\text{O}_3$
7. $2 \text{Pb}(\text{NO}_3)_2 = 2 \text{PbO} + 4 \text{NO}_2 + \text{O}_2$
8. $4 \text{KMnO}_4 + 10 \text{NaI} + 16 \text{H}_2\text{SO}_4 = 5 \text{I}_2 + 4 \text{MnSO}_4 + 10 \text{NaSO}_4 + 2 \text{K}_2\text{SO}_4 + 16 \text{H}_2\text{O}$
9. $2 \text{NaOH} + \text{H}_2\text{SO}_4 = \text{Na}_2\text{SO}_4 + 2 \text{H}_2\text{O}$
10. $2 \text{C}_8\text{H}_{18} + 25 \text{O}_2 = 16 \text{CO}_2 + 18 \text{H}_2\text{O}$
11. $2 \text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CHBrCOOH} + \text{K}_2\text{O} = 2 \text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CHBrCOOK} + \text{H}_2\text{O}$
12. $2 \text{Al}(\text{OH})_3 + 3 \text{H}_2\text{CO}_3 = \text{Al}_2(\text{CO}_3)_3 + 6 \text{H}_2\text{O}$
13. $\text{C}_2\text{H}_6\text{O} + 3 \text{O}_2 = 2 \text{CO}_2 + 3 \text{H}_2\text{O}$
14. $\text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2 = 6 \text{CO}_2 + 6 \text{H}_2\text{O}$
15. $3 \text{Cu} + 8 \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + 4 \text{H}_2\text{O} + 2 \text{NO}$
16. $\text{C}_5\text{H}_8\text{O}_2 + 2 \text{NaH} + 2 \text{HCl} = \text{C}_5\text{H}_{12}\text{O}_2 + 2 \text{NaCl}$
17. $2 \text{HCl} + \text{Na}_2\text{CO}_3 = 2 \text{NaCl} + \text{H}_2\text{O} + \text{CO}_2$
18. $\text{H}_2\text{SO}_4 + 2 \text{NaCN} = 2 \text{HCN} + \text{Na}_2\text{SO}_4$
19. $5 \text{S}_8 + 160 \text{HNO}_3 = 40 \text{H}_2\text{SO}_4 + 160 \text{NO}_2 + 4 \text{H}_2\text{O}$
20. $2 \text{HCl} + \text{Ba}(\text{OH})_2 = \text{BaCl}_2 + 2 \text{H}_2\text{O}$



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