



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 12

1. $\text{S} + 3 \text{O}_2 = \text{SO}_3$
2. $\text{HNO}_3 + \text{Ca(OH)}_2 = \text{Ca(NO}_3)_2 + \text{H}_2\text{O}$
3. $2 \text{K} + \text{H}_2\text{O} = \text{KOH} + \text{H}_2$
4. $4 \text{KMnO}_4 + 10 \text{NaI} + \text{H}_2\text{SO}_4 = 5 \text{I}_2 + 4 \text{MnSO}_4 + \text{NaSO}_4 + 2 \text{K}_2\text{SO}_4 + 16 \text{H}_2\text{O}$
5. $\text{Co(OH)}_2 + \text{H}_2\text{SO}_4 = \text{CoSO}_4 + \text{H}_2\text{O}$
6. $\text{HNO}_3 + \text{Ca(OH)}_2 = \text{Ca(NO}_3)_2 + \text{H}_2\text{O}$
7. $\text{Pb(NO}_3)_2 = \text{PbO} + 4 \text{NO}_2 + \text{O}_2$
8. $4 \text{C}_2\text{H}_5\text{O} + \text{O}_2 = \text{CO}_2 + 10 \text{H}_2\text{O}$
9. $2 \text{HNO}_3 + \text{Mg(OH)}_2 = \text{H}_2\text{O} + \text{Mg(NO}_3)_2$
10. $\text{N}_2\text{O}_5 + \text{Al(OH)}_3 = 2 \text{Al(OH)}_2\text{NO}_3 + \text{H}_2\text{O}$
11. $\text{Ba} + 12 \text{HNO}_3 = 5 \text{Ba(NO}_3)_2 + \text{N}_2 + \text{H}_2\text{O}$
12. $3 \text{Cl}_2 + \text{Cr} = 2 \text{Cr}^{(+3)} + \text{Cl}^{(-)}$
13. $\text{NaHCO}_2 + \text{O}_2 = \text{CO}_2 + \text{H}_2\text{O} + \text{Na}_2\text{CO}_3$
14. $2 \text{HBr} + \text{Mg(OH)}_2 = \text{H}_2\text{O} + \text{MgBr}_2$
15. $\text{Li} + 2 \text{H}_2\text{O} = \text{LiOH} + \text{H}_2$
16. $\text{Ca(NO}_3)_2 = 2 \text{CaO} + 4 \text{NO}_2 + \text{O}_2$
17. $\text{HCl} + \text{K}_2\text{SO}_3 = 2 \text{KCl} + \text{H}_2\text{O} + \text{SO}_2$
18. $2 \text{Zn} + \text{O}_2 = \text{ZnO}$
19. $10 \text{HCl} + 5 \text{As}_2\text{O}_3 + \text{NaNO}_3 + \text{H}_2\text{O} = 20 \text{NO} + \text{H}_3\text{AsO}_4 + 10 \text{NaCl}$
20. $2 \text{KNO}_3 + \text{C} + \text{S} = \text{K}_2\text{S} + \text{CO}_2 + \text{N}_2$



ANSWERS

1. $2 \text{S} + 3 \text{O}_2 = 2 \text{SO}_3$
2. $2 \text{HNO}_3 + \text{Ca}(\text{OH})_2 = \text{Ca}(\text{NO}_3)_2 + 2 \text{H}_2\text{O}$
3. $2 \text{K} + 2 \text{H}_2\text{O} = 2 \text{KOH} + \text{H}_2$
4. $4 \text{KMnO}_4 + 10 \text{NaI} + 16 \text{H}_2\text{SO}_4 = 5 \text{I}_2 + 4 \text{MnSO}_4 + 10 \text{NaSO}_4 + 2 \text{K}_2\text{SO}_4 + 16 \text{H}_2\text{O}$
5. $\text{Co}(\text{OH})_2 + \text{H}_2\text{SO}_4 = \text{CoSO}_4 + 2 \text{H}_2\text{O}$
6. $2 \text{HNO}_3 + \text{Ca}(\text{OH})_2 = \text{Ca}(\text{NO}_3)_2 + 2 \text{H}_2\text{O}$
7. $2 \text{Pb}(\text{NO}_3)_2 = 2 \text{PbO} + 4 \text{NO}_2 + \text{O}_2$
8. $4 \text{C}_2\text{H}_5\text{O} + 11 \text{O}_2 = 8 \text{CO}_2 + 10 \text{H}_2\text{O}$
9. $2 \text{HNO}_3 + \text{Mg}(\text{OH})_2 = 2 \text{H}_2\text{O} + \text{Mg}(\text{NO}_3)_2$
10. $\text{N}_2\text{O}_5 + 2 \text{Al}(\text{OH})_3 = 2 \text{Al}(\text{OH})_2\text{NO}_3 + \text{H}_2\text{O}$
11. $5 \text{Ba} + 12 \text{HNO}_3 = 5 \text{Ba}(\text{NO}_3)_2 + \text{N}_2 + 6 \text{H}_2\text{O}$
12. $3 \text{Cl}_2 + 2 \text{Cr} = 2 \text{Cr}^{(+3)} + 6 \text{Cl}^{(-)}$
13. $2 \text{NaHCO}_2 + \text{O}_2 = \text{CO}_2 + \text{H}_2\text{O} + \text{Na}_2\text{CO}_3$
14. $2 \text{HBr} + \text{Mg}(\text{OH})_2 = 2 \text{H}_2\text{O} + \text{MgBr}_2$
15. $2 \text{Li} + 2 \text{H}_2\text{O} = 2 \text{LiOH} + \text{H}_2$
16. $2 \text{Ca}(\text{NO}_3)_2 = 2 \text{CaO} + 4 \text{NO}_2 + \text{O}_2$
17. $2 \text{HCl} + \text{K}_2\text{SO}_3 = 2 \text{KCl} + \text{H}_2\text{O} + \text{SO}_2$
18. $2 \text{Zn} + \text{O}_2 = 2 \text{ZnO}$
19. $10 \text{HCL} + 5 \text{AS}_2\text{O}_3 + 15 \text{NANO}_3 + \text{H}_{20} = 20 \text{NO} + 10 \text{H}_3\text{ASO}_4 + 10 \text{NACL}$
20. $2 \text{KNO}_3 + 3 \text{C} + \text{S} = \text{K}_2\text{S} + 3 \text{CO}_2 + \text{N}_2$



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