



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 45

1. $\text{H}_2 + \text{N}_2 = \text{NH}_3$
2. $4 \text{I}_2\text{O}_5 + \text{H}_2\text{S} = 4 \text{I}_2 + \text{SO}_2 + \text{H}_2\text{O}$
3. $\text{NO}(\text{aq}) + 5 \text{H}_2(\text{g}) = \text{NH}_3(\text{s}) + 2 \text{H}_2\text{O}(\text{l})$
4. $\text{NH}_3 = \text{H}_2 + \text{N}_2$
5. $\text{HCl} + \text{O}_2 = \text{Cl}_2 + 2 \text{H}_2\text{O}$
6. $10 \text{HCl} + \text{As}_2\text{O}_3 + 15 \text{NaNO}_3 + \text{H}_2\text{O} = \text{NO} + 10 \text{H}_3\text{AsO}_4 + 10 \text{NaCl}$
7. $\text{C}_7\text{H}_{12} + \text{O}_2 = \text{CO}_2 + 6 \text{H}_2$
8. $\text{NO} + \text{O}_2 = \text{NO}_2$
9. $\text{Zn} + \text{H}_2\text{SO}_4 = \text{Zn}(\text{SO}_4)_2 + \text{H}_2$
10. $\text{K}_2\text{CO}_3 + \text{HCl} = \text{KCl} + \text{H}_2\text{O} + \text{CO}_2$
11. $2 \text{C}_6\text{H}_6 + \text{O}_2 = 12 \text{CO}_2 + \text{H}_2\text{O}$
12. $\text{S} + \text{HNO}_3 = \text{H}_2\text{SO}_4 + \text{NO}_2 + 2 \text{H}_2\text{O}$
13. $\text{C}_5\text{H}_8\text{O}_2 + \text{NaH} + 2 \text{HCl} = \text{C}_5\text{H}_{12}\text{O}_2 + \text{NaCl}$
14. $4 \text{NH}_3 + \text{NO} = 5 \text{N}_2 + \text{H}_2\text{O}$
15. $\text{Au}_2\text{S}_3 + \text{H}_2 = 2 \text{Au} + \text{H}_2\text{S}$
16. $\text{Zn}_3\text{Sb}_2 + \text{H}_2\text{O} = \text{Zn}(\text{OH})_2 + 2 \text{SbH}_3$
17. $3 \text{MnO}_2 + \text{Al} = \text{Mn} + 2 \text{Al}_2\text{O}_3$
18. $\text{H}_2\text{SO}_4 + \text{Pb}(\text{OH})_4 = \text{Pb}(\text{SO}_4)_2 + \text{H}_2\text{O}$
19. $2 \text{C}_5\text{H}_{11}\text{OH} + \text{O}_2 = \text{CO}_2 + 12 \text{H}_2\text{O}$
20. $\text{FeCl}_3 + \text{NaOH} = \text{Fe}(\text{OH})_3 + \text{NaCl}$



ANSWERS

1. $3 \text{H}_2 + \text{N}_2 = 2 \text{NH}_3$
2. $4 \text{I}_2\text{O}_5 + 10 \text{H}_2\text{S} = 4 \text{I}_2 + 10 \text{SO}_2 + \text{H}_2\text{O}$
3. $2 \text{NO}(\text{aq}) + 5 \text{H}_2(\text{g}) = 2 \text{NH}_3(\text{s}) + 2 \text{H}_2\text{O}(\text{l})$
4. $2 \text{NH}_3 = 3 \text{H}_2 + \text{N}_2$
5. $4 \text{HCl} + \text{O}_2 = 2 \text{Cl}_2 + 2 \text{H}_2\text{O}$
6. $10 \text{HCl} + 5 \text{As}_2\text{O}_3 + 15 \text{NaNO}_3 + \text{H}_2\text{O} = 20 \text{NO} + 10 \text{H}_3\text{AsO}_4 + 10 \text{NaCl}$
7. $\text{C}_7\text{H}_{12} + 7 \text{O}_2 = 7 \text{CO}_2 + 6 \text{H}_2$
8. $2 \text{NO} + \text{O}_2 = 2 \text{NO}_2$
9. $\text{Zn} + 2 \text{H}_2\text{SO}_4 = \text{Zn}(\text{SO}_4)_2 + 2 \text{H}_2$
10. $\text{K}_2\text{CO}_3 + 2 \text{HCl} = 2 \text{KCl} + \text{H}_2\text{O} + \text{CO}_2$
11. $2 \text{C}_6\text{H}_6 + 15 \text{O}_2 = 12 \text{CO}_2 + 6 \text{H}_2\text{O}$
12. $\text{S} + 6 \text{HNO}_3 = \text{H}_2\text{SO}_4 + 6 \text{NO}_2 + 2 \text{H}_2\text{O}$
13. $\text{C}_5\text{H}_8\text{O}_2 + 2 \text{NaH} + 2 \text{HCl} = \text{C}_5\text{H}_{12}\text{O}_2 + 2 \text{NaCl}$
14. $4 \text{NH}_3 + 6 \text{NO} = 5 \text{N}_2 + 6 \text{H}_2\text{O}$
15. $\text{Au}_2\text{S}_3 + 3 \text{H}_2 = 2 \text{Au} + 3 \text{H}_2\text{S}$
16. $\text{Zn}_3\text{Sb}_2 + 6 \text{H}_2\text{O} = 3 \text{Zn}(\text{OH})_2 + 2 \text{SbH}_3$
17. $3 \text{MnO}_2 + 4 \text{Al} = 3 \text{Mn} + 2 \text{Al}_2\text{O}_3$
18. $2 \text{H}_2\text{SO}_4 + \text{Pb}(\text{OH})_4 = \text{Pb}(\text{SO}_4)_2 + 4 \text{H}_2\text{O}$
19. $2 \text{C}_5\text{H}_{11}\text{OH} + 15 \text{O}_2 = 10 \text{CO}_2 + 12 \text{H}_2\text{O}$
20. $\text{FeCl}_3 + 3 \text{NaOH} = \text{Fe}(\text{OH})_3 + 3 \text{NaCl}$



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