

Balancing Chemical Equations (Key)  
Front Side

Please note that several of these equations are already balanced as written. They, of course, are unchanged from the worksheet.

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|---|---|
| 1. $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$                                       | 26. $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$   |
| 2. $\text{S}_8 + 12\text{O}_2 \rightarrow 8\text{SO}_3$   | 27. $2\text{N}_2 + \text{O}_2 \rightarrow 2\text{N}_2\text{O}$  |
| 3. $2\text{HgO} \rightarrow 2\text{Hg} + \text{O}_2$  | 28. $6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$                |
| 4. $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$                                 | 29. $\text{SiCl}_4 + 4\text{H}_2\text{O} \rightarrow \text{H}_4\text{SiO}_4 + 4\text{HCl}$                          |
| 5. $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$                         | 30. $2\text{H}_3\text{PO}_4 \rightarrow \text{H}_4\text{P}_2\text{O}_7 + \text{H}_2\text{O}$                        |
| 6. $\text{C}_{10}\text{H}_{16} + 8\text{Cl}_2 \rightarrow 10\text{C} + 16\text{HCl}$                | 31. $\text{CO}_2 + 2\text{NH}_3 \rightarrow \text{OC}(\text{NH}_2)_2 + \text{H}_2\text{O}$                          |
| 7. $4\text{Si}_2\text{H}_3 + 11\text{O}_2 \rightarrow 8\text{SiO}_2 + 6\text{H}_2\text{O}$          | 32. $2\text{Al}(\text{OH})_3 + 3\text{H}_2\text{SO}_4 \rightarrow \text{Al}_2(\text{SO}_4)_3 + 6\text{H}_2\text{O}$ |
| 8. $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$                                    | 33. $\text{Fe}_2(\text{SO}_4)_3 + 6\text{KOH} \rightarrow 3\text{K}_2\text{SO}_4 + 2\text{Fe}(\text{OH})_3$         |
| 9. $2\text{C}_7\text{H}_6\text{O}_2 + 15\text{O}_2 \rightarrow 14\text{CO}_2 + 6\text{H}_2\text{O}$ | 34. $\text{H}_2\text{SO}_4 + 8\text{HI} \rightarrow \text{H}_2\text{S} + 4\text{I}_2 + 4\text{H}_2\text{O}$         |
| 10. $4\text{FeS}_2 + 11\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3 + 8\text{SO}_2$                | 35. $2\text{Al} + 3\text{FeO} \rightarrow \text{Al}_2\text{O}_3 + 3\text{Fe}$                                       |
| 11. $\text{Fe}_2\text{O}_3 + 3\text{H}_2 \rightarrow 2\text{Fe} + 3\text{H}_2\text{O}$              | 36. $\text{Na}_2\text{CO}_3 + 2\text{HCl} \rightarrow 2\text{NaCl} + \text{H}_2\text{O} + \text{CO}_2$              |
| 12. $2\text{K} + \text{Br}_2 \rightarrow 2\text{KBr}$   | 37. $\text{P}_4 + 5\text{O}_2 \rightarrow 2\text{P}_2\text{O}_5$  |
| 13. $2\text{C}_2\text{H}_2 + 5\text{O}_2 \rightarrow 4\text{CO}_2 + 2\text{H}_2\text{O}$            | 38. $\text{K}_2\text{O} + \text{H}_2\text{O} \rightarrow 2\text{KOH}$   |
| 14. $2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$                            | 39. $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$   |
| 15. $\text{C}_7\text{H}_{16} + 11\text{O}_2 \rightarrow 7\text{CO}_2 + 8\text{H}_2\text{O}$         | 40. $2\text{Na}_2\text{O}_2 + 2\text{H}_2\text{O} \rightarrow 4\text{NaOH} + \text{O}_2$                            |
| 16. $\text{SiO}_2 + 4\text{HF} \rightarrow \text{SiF}_4 + 2\text{H}_2\text{O}$                      | 41. $\text{C} + \text{H}_2\text{O} \rightarrow \text{CO} + \text{H}_2$  |
| 17. $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$  | 42. $2\text{H}_3\text{AsO}_4 \rightarrow \text{As}_2\text{O}_5 + 3\text{H}_2\text{O}$                               |
| 18. $4\text{KClO}_3 \rightarrow 3\text{KClO}_4 + \text{KCl}$  | 43. $\text{Al}_2(\text{SO}_4)_3 + 3\text{Ca}(\text{OH})_2 \rightarrow 2\text{Al}(\text{OH})_3 + 3\text{CaSO}_4$     |
| 19. $\text{P}_4\text{O}_{10} + 6\text{H}_2\text{O} \rightarrow 4\text{H}_3\text{PO}_4$              | 44. $\text{FeCl}_3 + 3\text{NH}_4\text{OH} \rightarrow \text{Fe}(\text{OH})_3 + 3\text{NH}_4\text{Cl}$              |
| 20. $4\text{Sb} + 3\text{O}_2 \rightarrow \text{Sb}_4\text{O}_6$                                    | 45. $2\text{Ca}_3(\text{PO}_4)_2 + 6\text{SiO}_2 \rightarrow \text{P}_4\text{O}_{10} + 6\text{CaSiO}_3$             |
| 21. $\text{C}_3\text{H}_8 + 5\text{O}_2 \rightarrow 3\text{CO}_2 + 4\text{H}_2\text{O}$             | 46. $\text{N}_2\text{O}_5 + \text{H}_2\text{O} \rightarrow 2\text{HNO}_3$   |
| 22. $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$                      | 47. $2\text{Al} + 6\text{HCl} \rightarrow 2\text{AlCl}_3 + 3\text{H}_2$   |
| 23. $\text{PCl}_5 + 4\text{H}_2\text{O} \rightarrow 5\text{HCl} + \text{H}_3\text{PO}_4$            | 48. $6\text{H}_3\text{BO}_3 \rightarrow \text{H}_4\text{B}_6\text{O}_{11} + 7\text{H}_2\text{O}$                    |
| 24. $8\text{H}_2\text{S} + 8\text{Cl}_2 \rightarrow \text{S}_8 + 16\text{HCl}$                      | 49. $3\text{Mg} + \text{N}_2 \rightarrow \text{Mg}_3\text{N}_2$   |
| 25. $3\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$              | 50. $2\text{NaOH} + \text{Cl}_2 \rightarrow \text{NaCl} + \text{NaClO} + \text{H}_2\text{O}$                        |