

Solutions to 24 chemical equation balancing problems
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1. $2 \text{N}_2 + \text{O}_2 \rightleftharpoons 2 \text{N}_2\text{O}$
2. $6 \text{CO}_2 + 6 \text{H}_2\text{O} \rightleftharpoons \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2$
3. $\text{SiCl}_4 + 4 \text{H}_2\text{O} \rightleftharpoons \text{H}_4\text{SiO}_4 + 4 \text{HCl}$
4. $2 \text{H}_3\text{PO}_4 \rightleftharpoons \text{H}_4\text{P}_2\text{O}_7 + \text{H}_2\text{O}$
5. $\text{CO}_2 + 2 \text{NH}_3 \rightleftharpoons \text{OC}(\text{NH}_2)_2 + \text{H}_2\text{O}$
6. $2 \text{Al(OH)}_3 + 3 \text{H}_2\text{SO}_4 \rightleftharpoons \text{Al}_2(\text{SO}_4)_3 + 6 \text{H}_2\text{O}$
7. $\text{Fe}_2(\text{SO}_4)_3 + 6 \text{KOH} \rightleftharpoons 3 \text{K}_2\text{SO}_4 + 2 \text{Fe(OH)}_3$
8. $\text{H}_2\text{SO}_4 + 8 \text{HI} \rightleftharpoons \text{H}_2\text{S} + 4 \text{I}_2 + 4 \text{H}_2\text{O}$
9. $2 \text{Al} + 3 \text{FeO} \rightleftharpoons \text{Al}_2\text{O}_3 + 3 \text{Fe}$
10. $\text{Fe}_2\text{O}_3 + 3 \text{H}_2 \rightleftharpoons 2 \text{Fe} + 3 \text{H}_2\text{O}$
11. $\text{Na}_2\text{CO}_3 + 2 \text{HCl} \rightleftharpoons 2 \text{NaCl} + \text{CO}_2 + \text{H}_2\text{O}$
12. $2 \text{K} + \text{Br}_2 \rightleftharpoons 2 \text{KBr}$
13. $\text{P}_4 + 5 \text{O}_2 \rightleftharpoons 2 \text{P}_2\text{O}_5$
14. $2 \text{C}_2\text{H}_2 + 5 \text{O}_2 \rightleftharpoons 4 \text{CO}_2 + 2 \text{H}_2\text{O}$
15. $\text{K}_2\text{O} + \text{H}_2\text{O} \rightleftharpoons 2 \text{KOH}$
16. $\text{S}_8 + 12 \text{O}_2 \rightleftharpoons 8 \text{SO}_3$
17. $2 \text{HgO} \rightleftharpoons 2 \text{Hg} + \text{O}_2$
18. $\text{Zn} + 2 \text{HCl} \rightleftharpoons \text{ZnCl}_2 + \text{H}_2$
19. $2 \text{Na} + 2 \text{H}_2\text{O} \rightleftharpoons 2 \text{NaOH} + \text{H}_2$
20. $\text{C}_{10}\text{H}_{16} + 8 \text{Cl}_2 \rightleftharpoons 10 \text{C} + 16 \text{HCl}$
21. $4 \text{Si}_2\text{H}_3 + 11 \text{O}_2 \rightleftharpoons 8 \text{SiO}_2 + 6 \text{H}_2\text{O}$
22. $4 \text{Fe} + 3 \text{O}_2 \rightleftharpoons 2 \text{Fe}_2\text{O}_3$
23. $2 \text{C}_7\text{H}_6\text{O}_2 + 15 \text{O}_2 \rightleftharpoons 14 \text{CO}_2 + 6 \text{H}_2\text{O}$
24. $4 \text{FeS}_2 + 11 \text{O}_2 \rightleftharpoons 2 \text{Fe}_2\text{O}_3 + 8 \text{SO}_2$