

Now try your hand at balancing these equations:

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|-----|-----------------------------------|---------------------------|-----|---------------------------------------|-------------------------|
| 11) | $\text{Al} + \text{S} \gg \gg$ | Al_2S_3 | 12) | $\text{Ag} + \text{I}_2 \gg \gg \gg$ | AgI |
| 13) | $\text{Zn} + \text{O}_2 \gg \gg$ | ZnO | 14) | $\text{Pb} + \text{O}_2 \gg \gg \gg$ | PbO |
| 15) | $\text{Mg} + \text{Cl}_2 \gg \gg$ | MgCl_2 | 16) | $\text{Al} + \text{Br}_2 \gg \gg \gg$ | AlBr_3 |
| 17) | $\text{Al} + \text{O}_2 \gg \gg$ | Al_2O_3 | 18) | $\text{Fe} + \text{F}_2 \gg \gg \gg$ | FeF_2 |
| 19) | $\text{P} + \text{O}_2 \gg \gg$ | P_4O_{10} | 20) | $\text{Sn} + \text{O}_2 \gg \gg \gg$ | SnO |
| 21) | $\text{Bi} + \text{Cl}_2 \gg \gg$ | BiCl_3 | 22) | $\text{Sb} + \text{S} \gg \gg \gg$ | Sb_2S_3 |
| 23) | $\text{H}_2 + \text{N}_2 \gg \gg$ | NH_3 | 24) | $\text{Ca} + \text{O}_2 \gg \gg \gg$ | CaO |
| 25) | $\text{Cu} + \text{O}_2 \gg \gg$ | Cu_2O | 26) | $\text{Ba} + \text{O}_2 \gg \gg \gg$ | BaO |
| 27) | $\text{Sn} + \text{Cl}_2 \gg \gg$ | SnCl_4 | 28) | $\text{Mg} + \text{P} \gg \gg \gg$ | Mg_3P_2 |
| 29) | $\text{Na} + \text{S} \gg \gg$ | Na_2S | 30) | $\text{K} + \text{N}_2 \gg \gg \gg$ | K_3N |

These next are different because they have more than one product on the right hand side. The same rules still apply: there must be an equal number of each type of atom on both sides.

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|-----|----------------------------|---------------------------------|--------------------------------|--------------------------|
| 31) | $\text{Zn} +$ | $\text{HCl} \gg \gg$ | $\text{ZnCl}_2 +$ | H_2 |
| 32) | $\text{Al} +$ | $\text{HCl} \gg \gg$ | $\text{AlCl}_3 +$ | H_2 |
| 33) | $\text{Cl}_2 +$ | $\text{AlI}_3 \gg \gg$ | $\text{AlCl}_3 +$ | I_2 |
| 34) | $\text{Br}_2 +$ | $\text{CuI} \gg \gg$ | $\text{CuBr} +$ | I_2 |
| 35) | $\text{Na}_2\text{CO}_3 +$ | $\text{CaCl}_2 \gg \gg$ | $\text{CaCO}_3 +$ | NaCl |
| 36) | $\text{Cu} +$ | $\text{AgNO}_3 \gg \gg \gg$ | $\text{Cu}(\text{NO}_3)_2 +$ | Ag |
| 37) | $\text{Mg}(\text{OH})_2 +$ | $\text{H}_2\text{SO}_4 \gg \gg$ | $\text{Mg}_2\text{SO}_4 +$ | H_2O |
| 38) | $\text{NaOH} +$ | $\text{CuSO}_4 \gg \gg$ | $\text{Na}_2\text{SO}_4 +$ | $\text{Cu}(\text{OH})_2$ |
| 39) | $\text{NH}_4\text{OH} +$ | $\text{FeCl}_3 \gg \gg$ | $\text{NH}_4\text{Cl} +$ | $\text{Fe}(\text{OH})_3$ |
| 40) | $\text{Mg} +$ | $\text{H}_3\text{PO}_4 \gg \gg$ | $\text{Mg}_3(\text{PO}_4)_2 +$ | H_2 |