

Balancing practice

Name _____ Class _____ Mark _____ / 32

How to name

Put a number in every box (write 1 if none is needed). Never change the small numbers. Then write the name of each substance on the lines.

1. An element on its own: its name from the Periodic Table. H_2 is hydrogen, O_2 oxygen, Cl_2 chlorine.

2. Two elements: the first keeps its name; the second ends in **-ide**. The small numbers do not change the name: Na_2O is sodium oxide.

3. di means two: CO_2 carbon dioxide, SO_2 sulphur dioxide, CS_2 carbon disulphide.

oxygen → oxide chlorine → chloride
sulphur → sulphide bromine → bromide
nitrogen → nitride phosphorus → phosphide

4. OH is hydroxide: $LiOH$ is lithium hydroxide.

5. Learn these: H_2O water, NH_3 ammonia, HCl hydrochloric acid.

Names you have not met are printed for you.

Level 1 • One or two numbers (three are already balanced)

Totals, jumbled: 5, 6, 7, 4, 4, 3, 7, 3, 4

- | | | |
|---|--|---|
| 1 | <input type="text"/> Mg + <input type="text"/> $Cl_2 \rightarrow$ <input type="text"/> $MgCl_2$ | _____ + _____ $\rightarrow$ _____ |
| 2 | <input type="text"/> Na + <input type="text"/> $Cl_2 \rightarrow$ <input type="text"/> NaCl | _____ + _____ $\rightarrow$ _____ |
| 3 | <input type="text"/> HCl + <input type="text"/> NaOH $\rightarrow$ <input type="text"/> NaCl + <input type="text"/> H_2O | _____ + _____ $\rightarrow$ _____ + _____ |
| 4 | <input type="text"/> N_2 + <input type="text"/> $H_2 \rightarrow$ <input type="text"/> NH_3 | _____ + _____ $\rightarrow$ _____ |
| 5 | <input type="text"/> Rb + <input type="text"/> S $\rightarrow$ <input type="text"/> Rb_2S | _____ + _____ $\rightarrow$ _____ |
| 6 | <input type="text"/> C + <input type="text"/> S $\rightarrow$ <input type="text"/> CS_2 | _____ + _____ $\rightarrow$ _____ |
| 7 | <input type="text"/> NH_3 + <input type="text"/> HCl $\rightarrow$ <input type="text"/> NH_4Cl | _____ + _____ $\rightarrow$ ammonium chloride |
| 8 | <input type="text"/> Na + <input type="text"/> $O_2 \rightarrow$ <input type="text"/> Na_2O | _____ + _____ $\rightarrow$ _____ |
| 9 | <input type="text"/> Li + <input type="text"/> $H_2O \rightarrow$ <input type="text"/> LiOH + <input type="text"/> H_2 | _____ + _____ $\rightarrow$ _____ + _____ |

Level 2 • Bigger numbers (up to 6)

Totals, jumbled: 12, 9, 9, 6, 8, 12, 15, 5

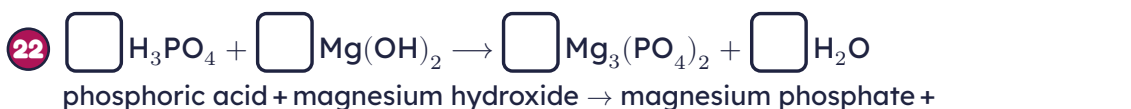
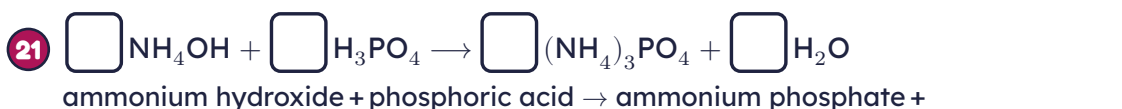
- | | | |
|----|---|--|
| 10 | <input type="text"/> Rb + <input type="text"/> P $\rightarrow$ <input type="text"/> Rb_3P | _____ + _____ $\rightarrow$ _____ |
| 11 | <input type="text"/> Al + <input type="text"/> S $\rightarrow$ <input type="text"/> Al_2S_3 | _____ + _____ $\rightarrow$ _____ |
| 12 | <input type="text"/> Cs + <input type="text"/> $N_2 \rightarrow$ <input type="text"/> Cs_3N | _____ + _____ $\rightarrow$ _____ |
| 13 | <input type="text"/> Li + <input type="text"/> $AlCl_3 \rightarrow$ <input type="text"/> LiCl + <input type="text"/> Al | _____ + _____ $\rightarrow$ _____ + _____ |
| 14 | <input type="text"/> N_2 + <input type="text"/> $O_2 \rightarrow$ <input type="text"/> N_2O_5 | _____ + _____ $\rightarrow$ dinitrogen pentoxide |
| 15 | <input type="text"/> K + <input type="text"/> $B_2O_3 \rightarrow$ <input type="text"/> K_2O + <input type="text"/> B | _____ + _____ $\rightarrow$ _____ + _____ |



Level 3 • Brackets

Totals, jumbled: 6, 8, 8, 12, 12, 8

A number after a bracket multiplies everything inside it: $\text{Mg}(\text{OH})_2$ is 1 Mg, 2 O, 2 H. Treat PO_4 or SO_4 as one block.



Level 4 • Burning fuels

Totals, jumbled: 33, 75, 35, 6, 19, 13

C first, then H, then O last. Need an odd number of O atoms? Double every number. Word equation for all six:

fuel + _____ $\rightarrow$ _____ + _____



Level 5 • Challenge

Totals, jumbled: 19, 19, 25

