

SOLUTIONS

Balancing Chemical Equations

Balance the equations below:

$N=2$ ✓
 $H=3$ ✓
 $O=6$ ✓
 $K=2$ ✓
 $Cl=2$ ✓

$N=1 \times 2$ ✓
 $H=3 \times 2$ ✓

$O=6$ ✓
 $K=1 \times 2$ ✓
 $Cl=1 \times 2$ ✓
Lowest common denominator.

- 1) $\underline{4} \text{ N}_2 + \underline{3} \text{ H}_2 \rightarrow \underline{2} \text{ NH}_3$
- 2) $\underline{2} \text{ KClO}_3 \rightarrow \underline{2} \text{ KCl} + \underline{3} \text{ O}_2$
- 3) $\underline{2} \text{ NaCl} + \underline{\quad} \text{ F}_2 \rightarrow \underline{2} \text{ NaF} + \underline{\quad} \text{ Cl}_2$
- 4) $\underline{2} \text{ H}_2 + \underline{\quad} \text{ O}_2 \rightarrow \underline{2} \text{ H}_2\text{O}$
- 5) $\underline{\quad} \text{ Pb(OH)}_2 + \underline{2} \text{ HCl} \rightarrow \underline{2} \text{ H}_2\text{O} + \underline{\quad} \text{ PbCl}_2$
- 6) $\underline{2} \text{ AlBr}_3 + \underline{3} \text{ K}_2\text{SO}_4 \rightarrow \underline{6} \text{ KBr} + \underline{\quad} \text{ Al}_2(\text{SO}_4)_3$
- 7) $\underline{\quad} \text{ CH}_4 + \underline{2} \text{ O}_2 \rightarrow \underline{\quad} \text{ CO}_2 + \underline{2} \text{ H}_2\text{O}$
- 8) $\underline{\quad} \text{ C}_3\text{H}_8 + \underline{5} \text{ O}_2 \rightarrow \underline{3} \text{ CO}_2 + \underline{4} \text{ H}_2\text{O}$
- * 9) $\underline{2} \text{ C}_8\text{H}_{18} + \underline{25} \text{ O}_2 \rightarrow \underline{16} \text{ CO}_2 + \underline{18} \text{ H}_2\text{O}$
- 10) $\underline{\quad} \text{ FeCl}_3 + \underline{3} \text{ NaOH} \rightarrow \underline{\quad} \text{ Fe(OH)}_3 + \underline{3} \text{ NaCl}$
- 11) $\underline{4} \text{ P} + \underline{5} \text{ O}_2 \rightarrow \underline{2} \text{ P}_2\text{O}_5$
- 12) $\underline{2} \text{ Na} + \underline{2} \text{ H}_2\text{O} \rightarrow \underline{2} \text{ NaOH} + \underline{\quad} \text{ H}_2$
- 13) $\underline{2} \text{ Ag}_2\text{O} \rightarrow \underline{4} \text{ Ag} + \underline{\quad} \text{ O}_2$
- 14) $\underline{\quad} \text{ S}_8 + \underline{12} \text{ O}_2 \rightarrow \underline{8} \text{ SO}_3$
- 15) $\underline{6} \text{ CO}_2 + \underline{6} \text{ H}_2\text{O} \rightarrow \underline{\quad} \text{ C}_6\text{H}_{12}\text{O}_6 + \underline{6} \text{ O}_2$
- 16) $\checkmark \text{ K} + \checkmark \text{ MgBr} \rightarrow \checkmark \text{ KBr} + \checkmark \text{ Mg}$
- 17) $\underline{2} \text{ HCl} + \underline{\quad} \text{ CaCO}_3 \rightarrow \underline{\quad} \text{ CaCl}_2 + \underline{\quad} \text{ H}_2\text{O} + \underline{\quad} \text{ CO}_2$
- 18) $\checkmark \text{ HNO}_3 + \checkmark \text{ NaHCO}_3 \rightarrow \checkmark \text{ NaNO}_3 + \checkmark \text{ H}_2\text{O} + \checkmark \text{ CO}_2$
- 19) $\underline{2} \text{ H}_2\text{O} + \underline{\quad} \text{ O}_2 \rightarrow \underline{2} \text{ H}_2\text{O}_2$
- 20) $\underline{2} \text{ NaBr} + \underline{\quad} \text{ CaF}_2 \rightarrow \underline{2} \text{ NaF} + \underline{\quad} \text{ CaBr}_2$
- 21) $\underline{\quad} \text{ H}_2\text{SO}_4 + \underline{2} \text{ NaNO}_2 \rightarrow \underline{2} \text{ HNO}_2 + \underline{\quad} \text{ Na}_2\text{SO}_4$