

CHAPTER 7	Balancing Chemical Reactions	BLM 7.0.3
ASSESSMENT		

Balance the following chemical reactions.

- (a) $\text{C}_6\text{H}_{10}\text{O}_5(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
- (b) $\text{AuCl}_3(\text{aq}) + \text{Ag}(\text{s}) \rightarrow \text{AgCl}(\text{s}) + \text{Au}(\text{s})$
- (c) $\text{Sc}_2\text{O}_3(\text{s}) + \text{H}_2\text{O}(\ell) \rightarrow \text{Sc}(\text{OH})_3(\text{s})$
- (d) $\text{Hg}(\ell) + \text{O}_2(\text{g}) \rightarrow \text{HgO}(\text{s})$
- (e) $\text{CH}_3\text{COOH}(\ell) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
- (f) $\text{C}(\text{s}) + \text{H}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow \text{CH}_3\text{OH}(\ell)$
- (g) $\text{C}_3\text{H}_8(\text{g}) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
- (h) $\text{Br}_2(\ell) + \text{NaI}(\text{aq}) \rightarrow \text{NaBr}(\text{aq}) + \text{I}_2(\text{s})$
- (i) $\text{Ca}(\text{s}) + \text{C}(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{CaCO}_3(\text{s})$
- (j) $\text{H}_2\text{SO}_4(\ell) \rightarrow \text{H}_2(\text{g}) + \text{S}_8(\text{s}) + \text{O}_2(\text{g})$
- (k) $\text{S}_2\text{Cl}_2(\ell) + \text{NH}_3(\text{g}) \rightarrow \text{S}_4\text{N}_4(\text{s}) + \text{S}_8(\text{s}) + \text{NH}_4\text{Cl}(\text{s})$
- (l) $\text{C}_6\text{H}_6(\ell) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
- (m) $\text{Ag}(\text{s}) + \text{O}_2(\text{g}) + \text{H}_2(\text{g}) \rightarrow \text{AgOH}(\text{s})$
- (n) $\text{HClO}_4(\ell) \rightarrow \text{H}_2(\text{g}) + \text{Cl}_2(\text{g}) + \text{O}_2(\text{g})$
- (o) $\text{CrCl}_2(\text{aq}) + \text{Mg}(\text{s}) \rightarrow \text{MgCl}_2(\text{aq}) + \text{Cr}(\text{s})$
- (p) $\text{Ba}(\text{NO}_3)_2(\text{aq}) + \text{NaCl}(\text{aq}) \rightarrow \text{BaCl}_2(\text{s}) + \text{NaNO}_3(\text{aq})$
- (q) $\text{C}_8\text{H}_{18}(\ell) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
- (r) $\text{I}_2(\text{s}) + \text{Na}_2\text{Se}(\text{aq}) \rightarrow \text{NaI}(\text{aq}) + \text{Se}(\text{s})$
- (s) $\text{Cu}(\text{s}) + \text{S}_8(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{CuSO}_3(\text{s})$
- (t) $\text{Au}(\text{s}) + \text{Cl}_2(\text{g}) \rightarrow \text{AuCl}_3(\text{s})$
- (u) $\text{CuSO}_4(\text{s}) \rightarrow \text{Cu}(\text{s}) + \text{S}_8(\text{s}) + \text{O}_2(\text{g})$
- (v) $\text{C}_2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{g})$
- (w) $\text{Pb}(\text{s}) + \text{S}_8(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{PbSO}_4(\text{s})$
- (x) $\text{P}_4\text{O}_{10}(\text{s}) + \text{H}_2\text{O}(\ell) \rightarrow \text{H}_3\text{PO}_4(\ell)$
- (y) $\text{BCl}_3(\text{g}) + \text{H}_2\text{O}(\ell) \rightarrow \text{H}_3\text{BO}_3(\text{s}) + \text{HCl}(\text{g})$
- (z) $\text{TiCl}_4(\ell) \rightarrow \text{Ti}(\text{s}) + \text{Cl}_2(\text{g})$