

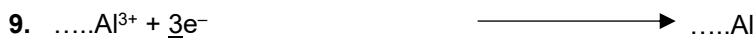
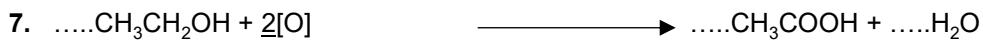
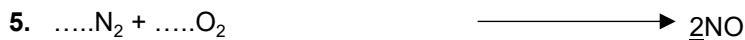
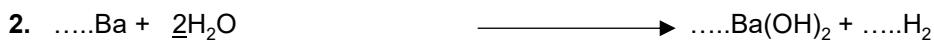
# Starters for 10

## Transition skills answers

### 0.1 Basic chemistry competencies

#### 0.1.1. Balancing equations

Accept multiples or appropriate fractions, 1 mark each.



#### 0.1.2. Constructing ionic formulae

1.



**2.**

- a.  $\text{SO}_4^{2-}$  (1 mark)
- b.  $\text{NO}_3^-$  (1 mark)
- c.  $\text{PO}_4^{3-}$  (1 mark)
- d.  $\text{HCOO}^-$  (1 mark)
- e.  $\text{CO}_3^{2-}$  (1 mark)

### 0.1.3. Writing equations from text

1 mark each, accept multiples for all except question 9.

- 1.  $3\text{Si} + 2\text{N}_2 \longrightarrow \text{Si}_3\text{N}_4$
- 2.  $\text{H}_2\text{SO}_4 + 2\text{NaOH} \longrightarrow \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$
- 3.  $\text{B} + 1.5\text{Cl}_2 \longrightarrow \text{BCl}_3$
- 4.  $\text{N}_2 + \text{O}_2 \longrightarrow 2\text{NO}$
- 5.  $\text{C}_2\text{H}_5\text{OH} + 3\text{O}_2 \longrightarrow 2\text{CO}_2 + 3\text{H}_2\text{O}$
- 6.  $\text{SiO}_2 + \text{C} + 2\text{Cl}_2 \longrightarrow \text{SiCl}_4 + \text{CO}_2$
- 7.  $\text{Fe}_2\text{O}_3 + 3\text{CO} \longrightarrow 2\text{Fe} + 3\text{CO}_2$
- 8.  $\text{CH}_4 + 2\text{O}_2 \longrightarrow \text{CO}_2 + 2\text{H}_2\text{O}$
- 9.  $0.5\text{Cl}_2 + 1.5\text{F}_2 \longrightarrow \text{ClF}_3$
- 10.  $2\text{NO}_2 + \text{H}_2\text{O} + 0.5\text{O}_2 \longrightarrow 2\text{HNO}_3$