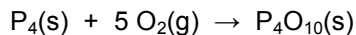1)   Explain in as much detail as possible what the following balanced equation tells you. You answer should include information from the state symbols.

$$P_4(s) + 5\ O_2(g) \rightarrow P_4O_{10}(s)$$

1 molecule of P$_4$ (a solid)

React with 5 molecules of O$_2$ (a gas)

To make 1 molecule of P$_4$O$_{10}$ (a solid)

Now balance the following equations.

2)   **2** Mg   +   O$_2$ →   **2** MgO

3)   CaO   +   **2** HCl   →   CaCl$_2$ +   H$_2$O

4)   **2** P   +   **3** Cl$_2$ →   **2** PCl$_3$

5)   **2** SO$_2$ +   O$_2$ →   **2** SO$_3$

6)   **2** CO   +   O$_2$ →   **2** CO$_2$

7)   C$_2$H$_4$ +   **3** O$_2$ →   **2** CO$_2$ +   **2** H$_2$O

8)   Fe$_2$O$_3$ +   **3** CO   →   **2** Fe   +   **3** CO$_2$

9)   Na$_2$CO$_3$ +   **2** HCl   →   **2** NaCl   +   CO$_2$ +   H$_2$O

10)   **2** KMnO$_4$ +   **16** HCl   →   **2** MnCl$_2$ +   **2** KCl   +   **5** Cl$_2$ +   **8** H$_2$O