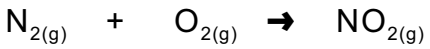
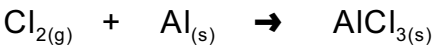
1. How many moles of nitrogen are needed to react with 14.0 mol of oxygen to produce nitrogen dioxide ?

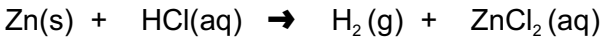


2. How many moles of aluminum chloride can be produced from the reaction of chlorine with 10.8 mol of aluminum ?

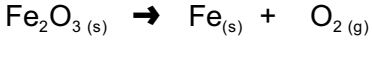


3. How many moles of water will be produced when 7.50 mol of propane are burned?

4. How many moles of hydrogen are produced when 13.0 mol of zinc react with hydrochloric acid, $HCl_{(aq)}$?



5. How many moles of oxygen will be formed when 10.2 mol of iron(III) oxide decompose to form iron and oxygen ?



6. How many moles of water will be produced from the reaction of nitric acid, $HNO_{3(aq)}$, with 2.5 mol of solid aluminum hydroxide?

$$HNO_{3\,(aq)} + Al(OH)_{3\,(aq)} \rightarrow$$

7. How many moles of lead (II) chloride will be produced when lead (II) nitrate reacts with 2.5 mol of sodium chloride?

$$Pb(NO_3)_2 + NaCl \rightarrow$$

8. How many moles of bromine are needed to react with enough lithium to produce 1.35×10^{11} moles lithium bromide ?

$$Li_{(s)} + Br_{2\,(l)} \rightarrow$$

9. How many mol of oxygen will be formed when 12 mol of aluminum oxide decompose to form aluminum and oxygen ?

$$Al_2O_{3\,(s)} \rightarrow$$

10. How many moles of $CO_{2(g)}$ will be produced by the complete combustion of 1.0 kmol of glucose?

$$C_6H_{12}O_{6\,(s)} + O_{2\,(g)} \rightarrow CO_{2\,(g)} + H_2O_{(g)}$$