

Week 11 HW

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Chapter 3

q 101

- a) $3 \text{Ca}(\text{OH})_2(\text{aq}) + 2 \text{H}_3\text{PO}_4(\text{aq}) \longrightarrow 6 \text{H}_2\text{O}(\text{l}) + \text{Ca}_3(\text{PO}_4)_2(\text{s})$
- b) $2 \text{Al}(\text{OH})_3(\text{s}) + 6 \text{HCl}(\text{aq}) \longrightarrow 2 \text{AlCl}_3(\text{aq}) + 6 \text{H}_2\text{O}(\text{l})$
- c) $2 \text{AgNO}_3(\text{aq}) + \text{H}_2\text{SO}_4(\text{aq}) \longrightarrow \text{Ag}_2\text{SO}_4(\text{s}) + 2 \text{HNO}_3(\text{aq})$

q 102

- a) $2 \text{KO}_2 + 2 \text{H}_2\text{O} \longrightarrow 2 \text{KOH} + \text{O}_2 + \text{H}_2\text{O}_2$
- b) $\text{Fe}_2\text{O}_3 + 6 \text{HNO}_3 \longrightarrow 2 \text{Fe}(\text{NO}_3)_3 + 3 \text{H}_2\text{O}$
- c) $4 \text{NH}_3 + 5 \text{O}_2 \longrightarrow 4 \text{NO} + 6 \text{H}_2\text{O}$
- d) $\text{PCl}_5 + 4 \text{H}_2\text{O} + \text{H}_3\text{PO}_4 + 5 \text{HCl}$
- e) $2 \text{CaO} + 5 \text{C} \longrightarrow 2 \text{CaC}_2 + \text{CO}_2$
- f) $2 \text{MoS}_2 + 7 \text{O}_2 \longrightarrow 2 \text{MoO}_3 + 4 \text{SO}_2$
- g) $\text{FeCO}_3 + \text{H}_2\text{CO}_3 \longrightarrow \text{Fe}(\text{HCO}_3)_2$

q 103

- a) $2 \text{C}_2\text{H}_6 + 15 \text{O}_2 \longrightarrow 12 \text{CO}_2 + 6 \text{H}_2\text{O}$
- b) $2 \text{C}_4\text{H}_{10} + 13 \text{O}_2 \longrightarrow 8 \text{CO}_2 + 10 \text{H}_2\text{O}$
- c) $\text{C}_{12}\text{H}_{22}\text{O}_{11} + 12 \text{O}_2 \longrightarrow 12 \text{CO}_2 + 11 \text{H}_2\text{O}$
- d) $4 \text{Fe} + 3 \text{O}_2 \longrightarrow 2 \text{Fe}_2\text{O}_3$
- e) $4 \text{FeO} + \text{O}_2 \longrightarrow 2 \text{Fe}_2\text{O}_3$

q 104

- a) $16 \text{ Cr} + 3 \text{ S}_8 \longrightarrow 8 \text{ Cr}_2\text{S}_3$
- b) $2 \text{ NaHCO}_3 \longrightarrow \text{Na}_2\text{CO}_3 + \text{CO}_2 + \text{H}_2\text{O}$
- c) $2 \text{ KClO}_3 \longrightarrow 2 \text{ KCL} + 3 \text{ O}_2$
- d) $2 \text{ Eu} + 6 \text{ HF} \longrightarrow 2 \text{ EuF}_3 + 3 \text{ H}_2$