Name: _____
Period: ___

Mole Ratios

(1) $AlCl_3 + K_3PO_4 \rightarrow AlPO_4 + 3KCl$

(a) If 10.2 mol of $AlCl_3$ reacts, determine the moles of KCl produced

(b) If 0.40 mol of $AlCl_3$ reacts, determine the moles of K_3PO_4 reacting

(c) If 4.3 mol of $AlPO_4$ is produced, determine the moles of $AlCl_3$ reacting

(d) If 7.70 mol of KCl is produced, determine the moles of $AlPO_4$ produced

(2) $2Fe_2O_3 + 3C \rightarrow 4Fe + 3CO_2$

(a) If 2.50 mol of C reacts, determine the moles of Fe_2O_3 reacting

(b) If 0.04 mol of Fe_2O_3 reacts, determine the moles of Fe produced

(c) If 0.300 mol of Fe is produced, determine the moles of CO_2 produced

(d) If 5.7 mol of CO_2 is produced, determine the moles of C reacting

(3) $2C_4H_{10} + 13O_2 \rightarrow 8CO_2 + 10H_2O$

(a) If 0.80 mol of O_2 reacts, determine the moles of C_4H_{10} reacting

(b) If 0.030 mol of C_4H_{10} reacts, determine the moles of CO_2 produced

(c) If 8.3 mol of H_2O is produced, determine the moles of O_2 reacting

(d) If 12.4 mol of CO_2 is produced, determine the moles of H_2O produced

Answers:

(1) (a) 30.6 mol KCl produced
(b) 0.40 mol K_3PO_4 reacting
(c) 4.3 mol $AlCl_3$ reacting
(d) 2.57 mol $AlPO_4$ produced

(2) (a)1.67 mol Fe_2O_3 reacting
(b) 0.08 mol Fe produced
(c) 0.225 mole CO_2 produced
(d) 5.7 mol C reacting

(3) (a) 0.12 mol C_4H_{10} reacting
(b) 0.12 mol CO_2 produced
(c)11 mol O_2 reacting
(d) 15.5 mol H_2O produced