

Revised August 2011



HONORS WORKSHEET 4g: ANSWERS

1.
 - (a) $\text{C}_3\text{H}_8(\text{g}) + 5\text{O}_2(\text{g}) \rightarrow 3\text{CO}_2(\text{g}) + 4\text{H}_2\text{O}(\text{g})$
 - (b) 6.3 moles
 - (c) (i) Oxygen
(ii) 180. G
(iii) 55.6%
2.

Empirical and molecular $\text{K}_3\text{FeC}_6\text{N}_6$
3.
 - (a) Heating until no further mass loss is observed, i.e. all of the water has been removed.
 - (b) "Without water"
 - (c) 5
4.
 - (a) $\text{S}_{(\text{s})} + \text{O}_{2(\text{g})} \rightarrow \text{SO}_{2(\text{g})}$
 - (b) 640 g
 - (c) 768 g
 - (d) $2\text{SO}_{2(\text{g})} + \text{O}_{2(\text{g})} \rightarrow 2\text{SO}_{3(\text{g})}$
 - (e) 66.7%
 - (f) $\text{SO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{H}_2\text{S}_2\text{O}_7$
 - (g) 10 mols
 - (h) $\text{H}_2\text{S}_2\text{O}_7 + \text{H}_2\text{O} \rightarrow 2\text{H}_2\text{SO}_4$
 - (i) 882 g