ChemEd 2013 Conference
Waterloo, ON; July 28 – August 1, 2013

Workshop on August 29th: Having Fun with the Routine:
Lewis Structures, Oxidation States, Nomenclature, and Stoichiometry

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ANSWERS OF THE STOICHIOMETRY EXERCISES

1. 21.4 g Fe_2O_3; 7.25 g Al; 13.7 g Al_2O_3
2. a) 76.23 mg $C_6H_8O_7$ b) 52.39 mg CO_2
3. a) 11.0 g C_3H_3N b) 11.3 g H_2O; 6.23 g C_3H_6 (excess) 1.5 g NH_3 (excess),
4. 0.607 g Na_2CrO_4
5. 0.426 g $Ca_3(PO_4)_2$
6. 0.0392 mol H_3PO_4/L
7. Basic; 2.50 mol Na^+/L; 0.250 mol NO_3^-/L; 2.25 mol OH^-/L
8. Heat released = –34.4 kJ
9. pH of buffer alone = 3.36
   pH after adding 6.0 g NaOH to 2.00 L of buffer solution = 3.45
   ΔpH = +0.09 (buffer capacity and buffer effect)

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