

Chemistry 122 and Chemistry 121- Thermochemistry

INTRODUCTORY ACTIVITY AND REVIEW

Name: _____

1. Write the complete, balanced, chemical equations for the combustion of the methane, octane, ethanol, carbon and hydrogen. Be sure to give the states of all the chemicals.
2. Calculate the mass of carbon dioxide produced by burning 1.000 kg of each of the fuels. (Reminder - this is a mass-mass problem!)

a) Methane ($\text{CH}_4(\text{g})$)

b) Octane ($\text{C}_8\text{H}_{18}(\text{l})$)

c) Ethanol ($\text{C}_2\text{H}_5\text{OH}(\text{l})$)

d) Hydrogen ($\text{H}_2(\text{g})$)

e) Coal - Carbon ($\text{C}(\text{s})$)

f) Propane ($\text{C}_3\text{H}_8(\text{g})$)

3. List the fuels in order from least amount of carbon dioxide produced per kg of fuel to the most.
Least carbon dioxide \rightarrow Most carbon dioxide
