Name _____
Period ____   Date ___/___/___

6 • Energy and Chemical Reactions

QUICK CHECK #1

Try these problems. If you can DO them, check the box (☑). If you CANNOT do them, write some notes TO YOURSELF about what you need to study to succeed at these problems.

☐ How much energy does it take to heat 150. grams of aluminum metal from 25°C to 150.°C?
The specific heat of aluminum is 0.900 J/g·°C.

☐ When a solution of NaOH is neutralized by a solution of HCl, the solution gets very hot.
Draw the Potential Energy curve for this reaction. Label the x-axis for this diagram.

PE
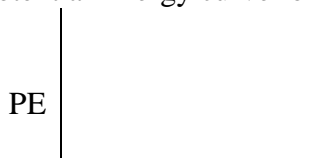
☐ A system has a change in energy of +45 J. If 30 J of work was done on the system, then _____ J of heat
must have been _____ (absorbed / released).

☐ A 3.00 gram sample of propane, C_3H_8, is burned and warms 100. grams of water from 20.0°C to 100.°C.
What is the ΔH of combustion for C_3H_8?   What is the sign of the ΔH?

☐ Calculate the amount of heat needed to melt 54.0 g of ice if the heat of fusion of ice is 6.009 kJ/mol