**Enthalpy worksheet #1 Due: Next class Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. A student mixes 80.0 mL of water at 85.0℃ with 200.0 mL of water at 20.0℃. What is the final temperature of the water after mixing?
2. If the specific heat capacity of aluminum is 0.90 J/g℃, what is the heat energy required to bring the temperature of a 10.5 g aluminum sample from 15℃ to 22℃?
3. Find the specific heat capacity of 20.0 g of a metal initially at 250.0℃. When placed in 180 mL of water, it raises the temperature of water from 23.1℃ to 25.4℃.
4. A calorimeter containing 765 g of water at 19.4°C shows the temperature rising to 27.0°C as 3.55 g of iron burn in the presence of oxygen in the sample chamber. Find the energy released per mole of iron burned. (Assume all the energy went into the water!)