

Calorimetry Calculations Practice

**** Please round all answers to 2 decimal places. Every answer should have 2 decimal places****

$$Q = mc\Delta T \text{ or } Q = mH_{\text{fusion}} \text{ or } Q = mH_{\text{vaporization}}$$

1. A 15.75-g piece of metal absorbs 1086.75 joules of heat energy, and its temperature changes from 25°C to 175°C. Calculate the specific heat capacity of the metal.
2. Calculate the amount of heat needed to melt 35.0 g of ice at 0°C. Express your answer in Joules.
3. What mass of water will change its temperature by 3°C when 525 J of heat is added to it?
The specific heat of water is 4.18 J/g°C
4. What mass of aluminum metal would absorb 250.0 kJ when it melted at its melting point?
The molar enthalpy of fusion for aluminum is 396.6J/g
5. 1740J of heat are required to raise the temperature of 50g of what metal from 50°C to 70°C?
6. Calculate the amount of heat needed to convert 190.0 g of liquid water at 100°C to steam at 100°C.