

Calorimetry Homework

Use the information in this chart to answer the following questions:

	C_p of ice ($J/g^{\circ}C$)	H_{fus} (kJ/mol)	melting point ($^{\circ}C$)	C_p of water ($J/g^{\circ}C$)	H_{vap} (kJ/mol)	boiling point ($^{\circ}C$)	C_p of steam ($J/g^{\circ}C$)
water	1.8	6.0	0	4.2	40.6	100	1.9

- 1) If I have 125 grams of water at a temperature of $-25^{\circ}C$ and heat it to $145^{\circ}C$, what will the change in enthalpy be?
- 2) Sketch the heating curve (temperature vs. time) for the process in #1:
- 3) I have 18.7 grams of an unknown liquid chemical at a temperature of $-35^{\circ}C$. If it takes 683 J of energy to heat it to a temperature of $-12^{\circ}C$, what is the specific heat of this chemical?
- 4) If it takes 1,134 kJ to melt the compound in problem 3 and there are 0.65 moles of the compound present, what is this compound's heat of fusion?