

Name _____

Honors Chemistry
Phase Change Heat Problems

1. 0.932 mol of a certain substance is at its melting point, 5.60 kJ are added to completely melt this substance, what is the H_{fus} and what is the substance?
2. How much heat is required to heat 1.35 mol of liquid nitrogen at -196°C to 22°C ?
3. How much heat is required to heat 34 g of solid Pb at 580 K into a liquid at 630 K?

4. How much heat is required to turn 320g of ice at -15°C to steam at 112°C ?
5. 17.2 kJ are added to lead at 575 K and it heats to 648 K, how many moles of lead were present?
6. **Extra Credit**--34 g of ice at 0°C is dropped into 170 g of water and the system come to equilibrium at 30°C what was the initial temperature of the water?