Thermochemistry Review Problems - SHOW ALL WORK THE WAY WE HAVE DONE IN CLASS!

Box around final answer! Section # --- Work --- Answer

1) When 63g of water at 100°C is boiled away how much energy is absorbed by the water?
2) If you cool down 23g steam at 100°C how much energy is released by the steam?
3) If 63g of water at 0°C is heated to 100°C how much energy is absorbed by the water?
4) How much energy is released by 23g of water if it is cooled from 100°C to 0°C?
5) 63g of Ice at 0°C melts. What amount of energy is absorbed?
6) 23g of water at 0°C freezes. What amount of energy is released?
7) 2g of steam is cools from 125°C to 110°C. What is the amount of energy released?
8) 15g of ice heats from -15°C to -2.5°C. How much energy is absorbed in this process?
9) How much energy is absorbed when 15g of ice is boiled away?
10) How much energy is released when 10g of steam is cooled from 120°C to -20°C ice?
11) If 25g of ice at -5°C is heated to steam at 105°C how much energy is absorbed?
12) If 8350J of energy was absorbed by a block of ice in order to melt it, what was the mass of the ice block?
13) What mass of water required 4703J of energy to heat it from 25°C to 50°C?
14) What is the specific heat of an unknown metal if a 20kg piece of the metal absorbs 70500J of energy in order to heat it from 40°C to 110°C?
15) How much energy does it take to raise 50g of liquid ethanol at 25°C to 78°C and then vaporize it? The specific heat of liquid ethanol is 2.44 J/g°C and the latent heat of vaporization is 838 J/g°C