c_{water} = 4200 J/kgK c_{ice} = 2100 J/kgK c_{copper} = 390 J/kgK

$L_{f,\ ice}$ = 3.34*10^5 J/kg $L_{v,\ water}$ = 22.5*10^5 J/kg

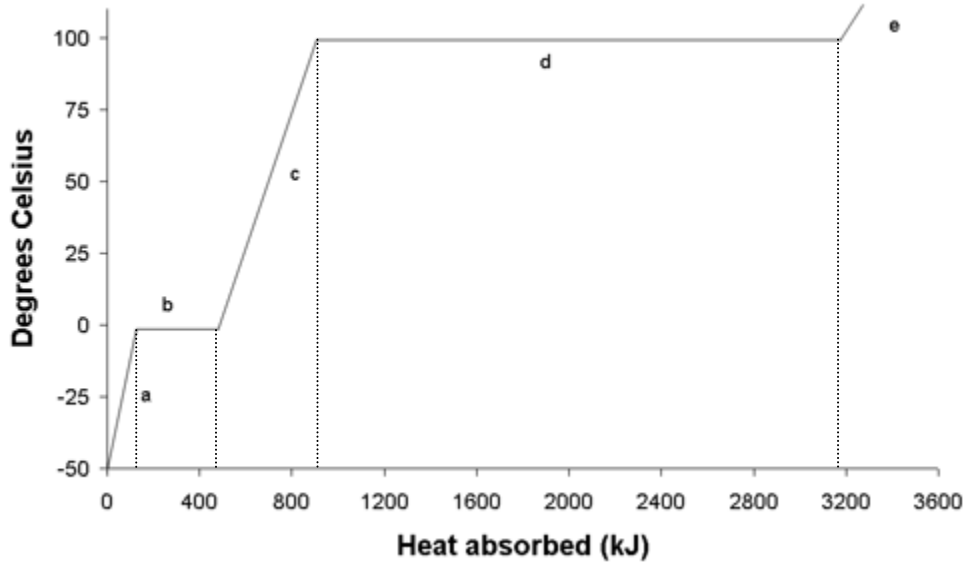
Latent heat and Specific heat capacity questions.

1. How much water at 50°C is needed to just melt 2.2 kg of ice at 0°C?

2. How much water at 32°C is needed to just melt 1.5 kg of ice at -10°C?

3. How much steam at 100° is needed to just melt 5 kg of ice at -15°C?

4. A copper cup holds some cold water at 4°C. The copper cup weighs 140g while the water weighs 80g. If 100g of hot water, at 90°C is added, what will be the final temperature of the water?



5. a)Explain where the energy is going at each section of the curve from "a" to "e"

b) Using section "b" , calculate the amount of ice used to produce the graph

c) Using section "c", calculate the amount of ice used to produce the graph