

Quiz 10.2 – Enthalpies of Phase Change and Heating Curves

Name: _____

Question 1

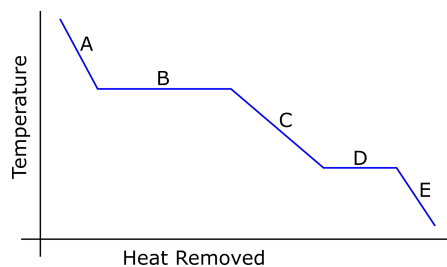
Solid paraffin wax has a specific heat of $2.5 \frac{J}{g K}$. If $300.0 J$ of heat are added to $15.25 g$ of paraffin wax, how much will the temperature raise?

Question 2

Paraffin wax has a melting point of $37^\circ C$, and $\Delta H_{fus} = 210 \frac{J}{g}$. How many J of heat are required to melt $5.75 g$ of paraffin wax?

Question 3

Example Exercise 10.10 in Section 10.3 of your textbook gives the necessary values to answer this question. $38.0 kJ$ of heat are removed from a $10.0 g$ sample of steam (water vapor) at $250.0^\circ C$. Give the total energy for each of the steps labeled A through E on the cooling curve below, and give the final phase and temperature of the water.



李绅 (*Toiling Farmers*)

By 悯农 (Li Shen)

锄禾日当午，
汗滴禾下土。
谁知盘中餐，
粒粒皆辛苦。

Farmers weeding at noon,
Sweat down the field soon.
Who knows food on a tray
Thanks to their toiling day?