Quiz 12.2 – Enthalpies of Phase Change and Heating Curves

Name: _____

Question 1

Solid paraffin wax has a specific heat of $2.5\dfrac{J}{g\,K}$. If $300.0\ J$ of heat are added to $15.25\ g$ of paraffin wax, how much will the temperature raise?
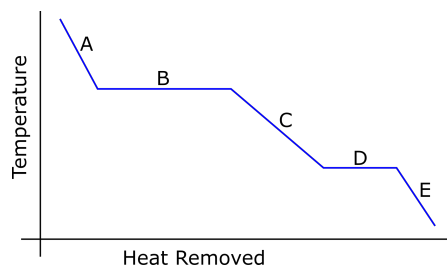
Question 2

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

Question 3

Table 12.3 in 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 $250.0\,°C$. 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?