

Quiz 12.3 – Vapor Pressure and Phase Diagrams

Name: _____

All questions will refer to the phase diagram for an unknown substance shown below

Question 1

On the diagram, label the regions which represent each phase (solid, liquid, and gas)

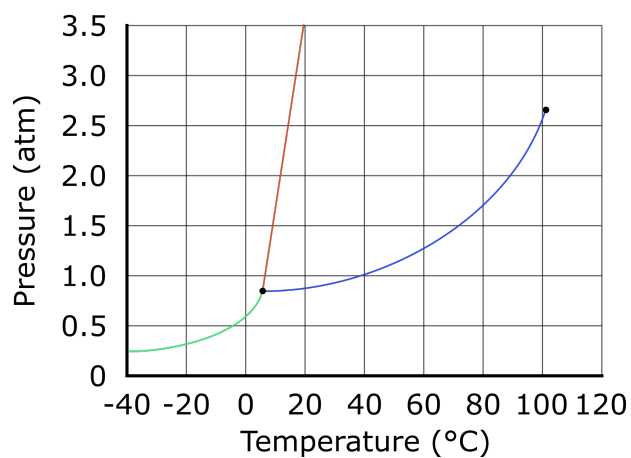
Question 2

Estimate the normal boiling temperature

Question 3

Is the liquid or solid phase more dense?

Unknown Substance Phase Diagram

**Question 4**

Estimate the temperature and pressure at the triple point and the critical point

Question 5

Use your estimates to calculate ΔH_{vap}

Question 6

Use the normal boiling point and your estimate of ΔH_{vap} to predict what the vapor pressure *would be* at 120 °C, if there were no critical point

Птичка (A Little Bird)

By Александр Сергеевич Пушкин (Alexander Sergeyevich Pushkin)

В чужбине свято наблюдаю
Родной обычай старины:
На волю птичку выпускаю
При светлом празднике весны.

Я стал доступен утешенью;
За что на бога мне роптать,
Когда хоть одному творенью
Я мог свободу даровать!

In alien lands I keep the body
Of ancient native rites and things:
I gladly free a little birdie
At celebration of the spring.

I'm now free for consolation,
And thankful to almighty Lord:
At least, to one of his creations
I've given freedom in this world!