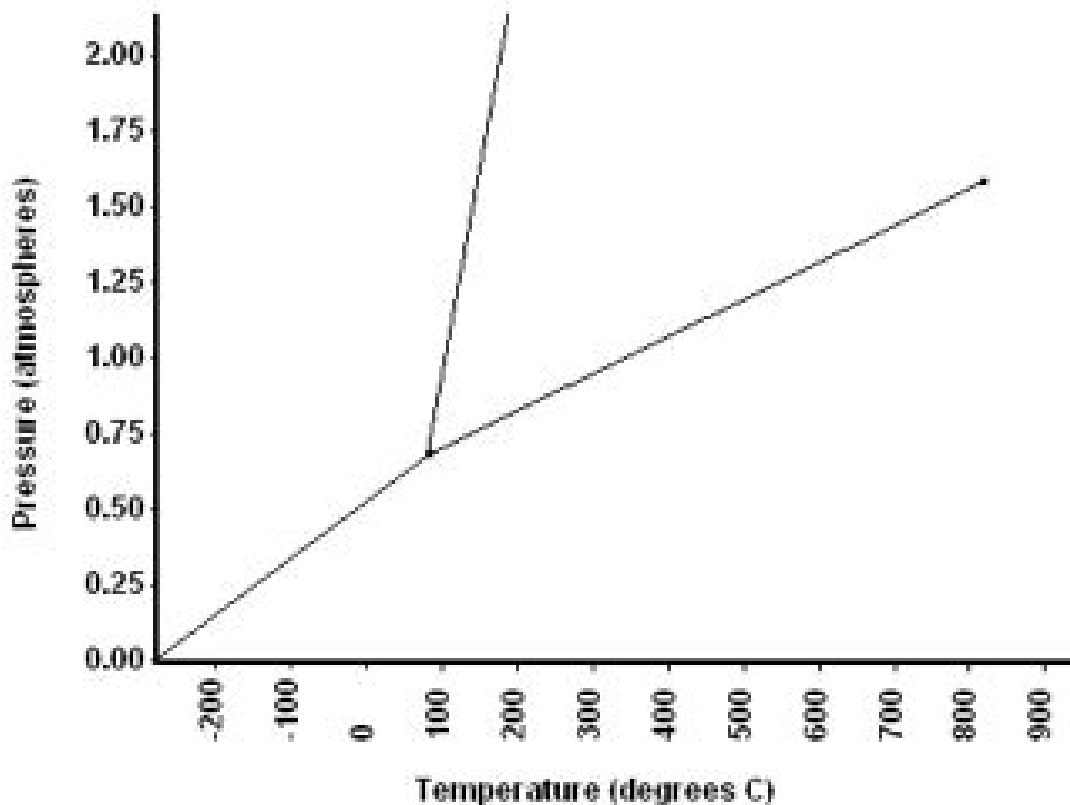


Phase Diagram Practice

Refer to the phase diagram below when answering the questions

NOTE: "Normal" refers to STP – Standard Temperature and/or Pressure.



- 1) What are the values for temperature and pressure at **STP**? T = _____, P = _____
- 2) What is the normal **freezing** point of this substance? _____
- 3) What is the normal **boiling** point of this substance? _____
- 4) What is the normal **melting** point of this substance? _____
- 5) What is the phase (s, l, g) of a substance at **2.0 atm** and 100 °C? _____
- 6) What is the phase (s, l, g) of a substance at **0.75 atm** and 100 °C? _____
- 7) What is the phase (s, l, g) of a substance at **0.5 atm** and 100 °C? _____
- 8) What is the phase (s, l, g) of a substance at 1.5 atm and **50 °C**? _____
- 9) What is the phase (s, l, g) of a substance at 1.5 atm and **200 °C**? _____
- 10) What is the phase (s, l, g) of a substance at 1.5 atm and **800 °C**? _____
- 11) What is the condition of the **triple point** of this substance? T = _____, P = _____

12) If a quantity of this substance was at an initial pressure of **1.25 atm** and a temperature of **300° C** and was lowered to a pressure of 0.25 atm, what phase change(s) would occur? _____

13) If a quantity of this substance was at an initial pressure of **1.25 atm** and a temperature of **0° C** and was lowered to a pressure of 0.25 atm, what phase change(s) would occur? _____

14) If a quantity of this substance was at an initial pressure of **1.0 atm** and a temperature of **200° C** and was lowered to a temperature of -200° C, what phase change(s) would occur? _____

15) If a quantity of this substance was at an initial pressure of **0.5 atm** and a temperature of **200° C** and was lowered to a temperature of -200° C, what phase change(s) would occur? _____

16) At what pressure would it be possible to find this substance in the gas, liquid, **and** solid phase? _____