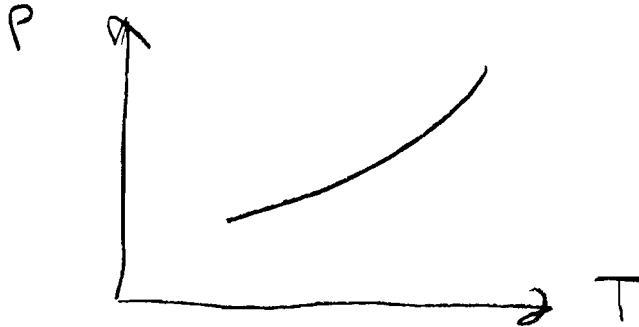
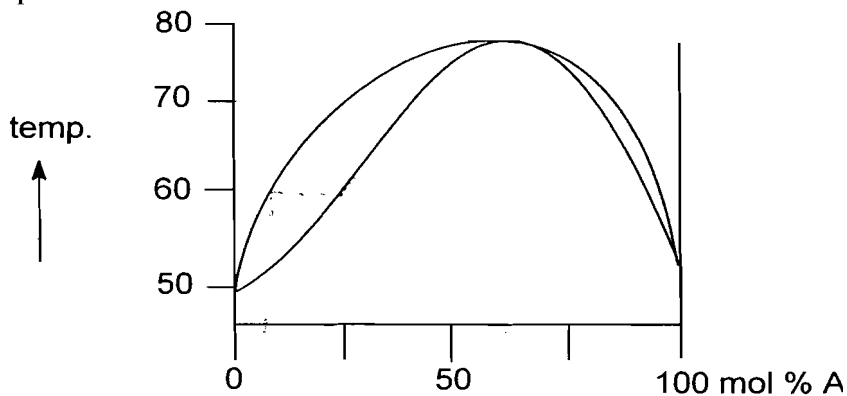


1. Sketch a curve illustrating the qualitative relationship of temperature and vapor pressure for a fluid. Select temperature as your x axis, pressure as your y axis ! (5 pts).



2. Consider the boiling point-composition diagram below and answer the following questions:



a. At which temperature does a mixture of 75 mol% B and 25 mol% A boil, around 60°, around 70 °, or around 80 °? (2 pts)

b. If you condense the vapors given off by a boiling mixture of 75 mol% B and 25 mol% A, what composition do they have? Around 10% B, around 40% B, or around 90% B? (2 pts)

c. Do A and B constitute an ideal mixture? (2 pts)

no!

4. Indicate which statements are correct: A When I double the temperature of a fluid (e.g., from 10 to 20° C), its vapor pressure will also double. B Only compounds, which are liquid under ambient conditions (23°, 1 atmosphere) can be distilled. C The boiling point of a fluid increases with increasing pressure. D Fractional distillation is poorly suited to separate very small (< 1 mL) volumes of liquid. (4 pts)