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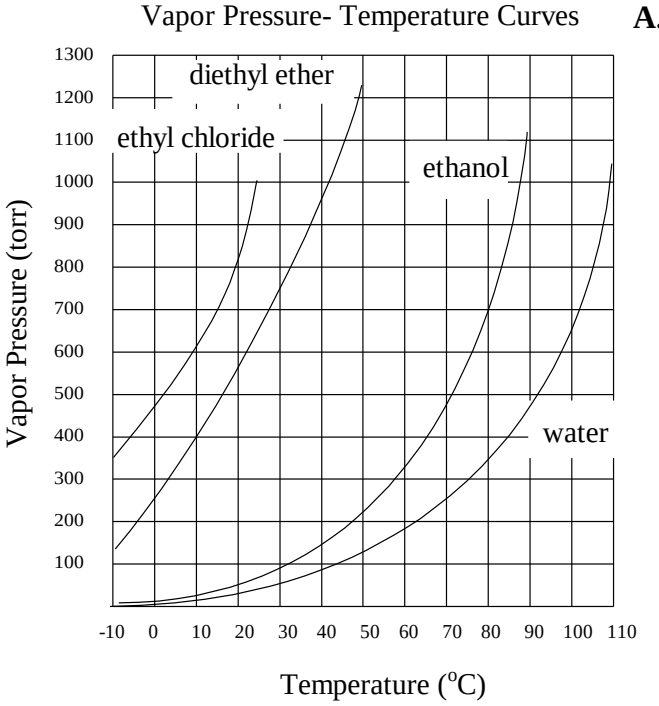
Workshop 7 – Graphical Representation of Data

Answer the following questions by plotting and interpreting the data respectively.



A. Reading a Graph

From the figure at the left, read values for the following:

1. The vapor pressure of water at 70 ºC.

   _____

2. The temperature at which diethyl ether has a vapor pressure of 600 torr.

   _____

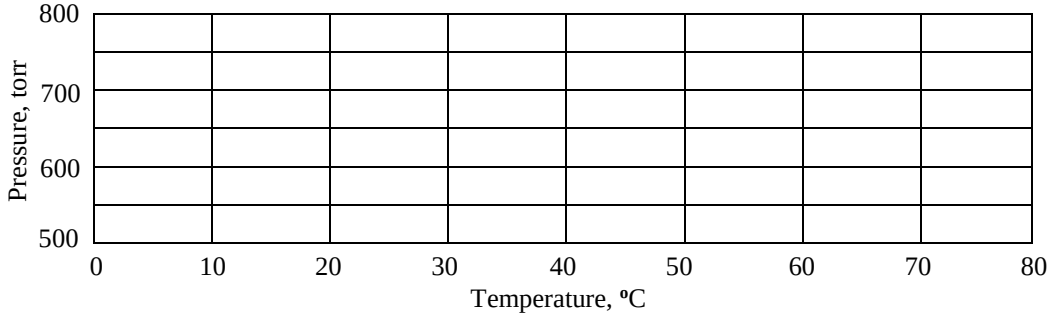
3. The temperature at which ethyl chloride has the same pressure ethanol has at 80 ºC.

   _____

B. Plotting Graphs

1. Plot the following pressure-temperature data for a gas on the graph. Draw the best possible straight line through the data.

Temperature, °C:	0	20	40	60	80
Pressure, torr:	550	605	665	720	775



2. Solve for the slope of the graph above. Slope is defined as rise/run ($\Delta y/\Delta x$).

Slope = _____ (include units)

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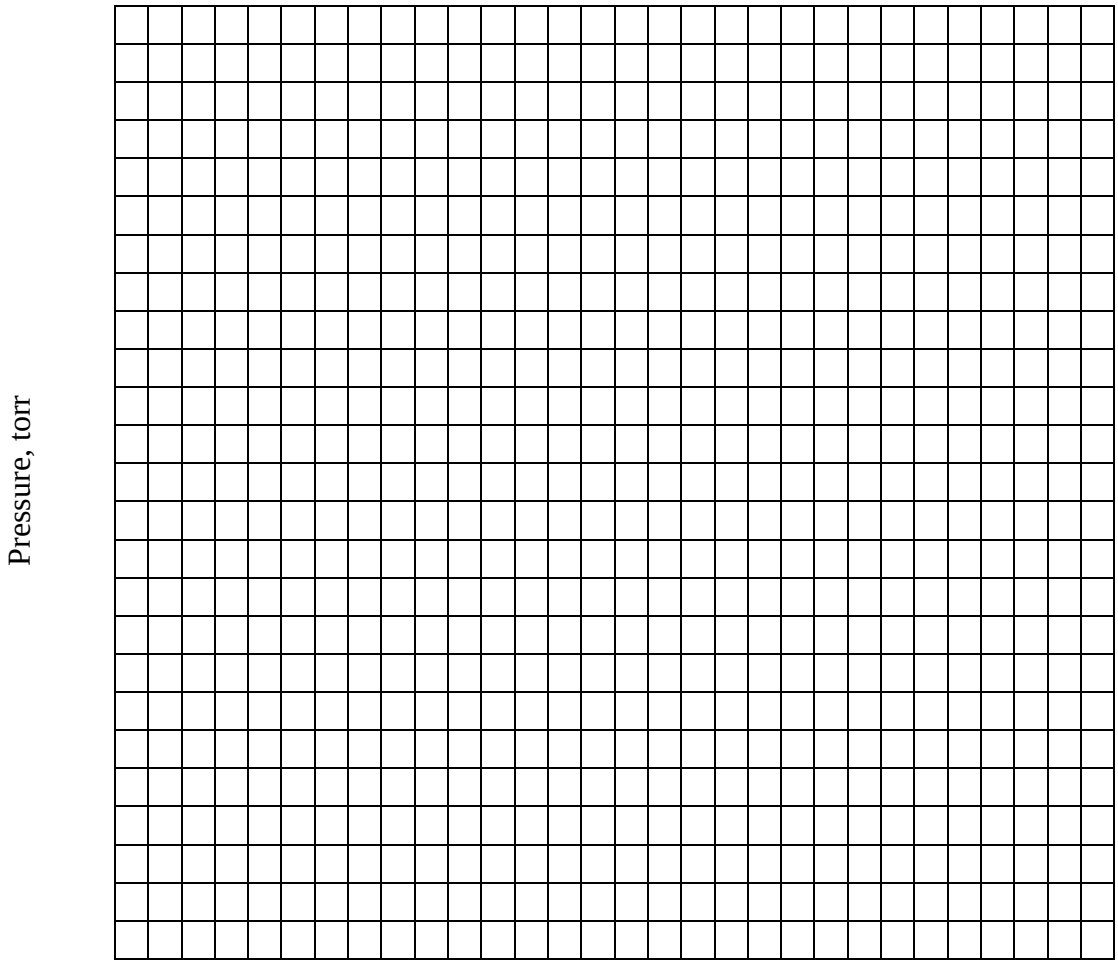
3. (a) Study the data given below; (b) determine suitable scales for pressure and for volume and mark these scales on the graph; (c) plot the eight points on the graph; and (d) draw the best possible CURVE through these points.

Pressure-Volume data for a gas

Volume, mL	107	76.4	55.7	45.6	35.2	29.7	24.3	20.1
Pressure, torr	25	35	48	60	76	90	110	133



Read from your graph:

(a) The pressure at 100 mL _____

(b) The volume at 70 torr _____