

Name: _____ Date: _____ Period: _____ Seat #: _____

Explaining Problems (from the 1994 AP Exam)

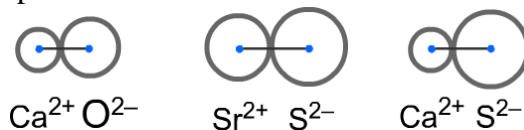
For each of the following, use appropriate chemical principles to explain the observation.

At room temperature, NH_3 is a gas and H_2O is a liquid, even though NH_3 has a molar mass of 17 grams and H_2O has a molar mass of 18 grams.

$\text{C}_{(\text{graphite})}$ is used as a lubricant, whereas $\text{C}_{(\text{diamond})}$ is used as an abrasive.

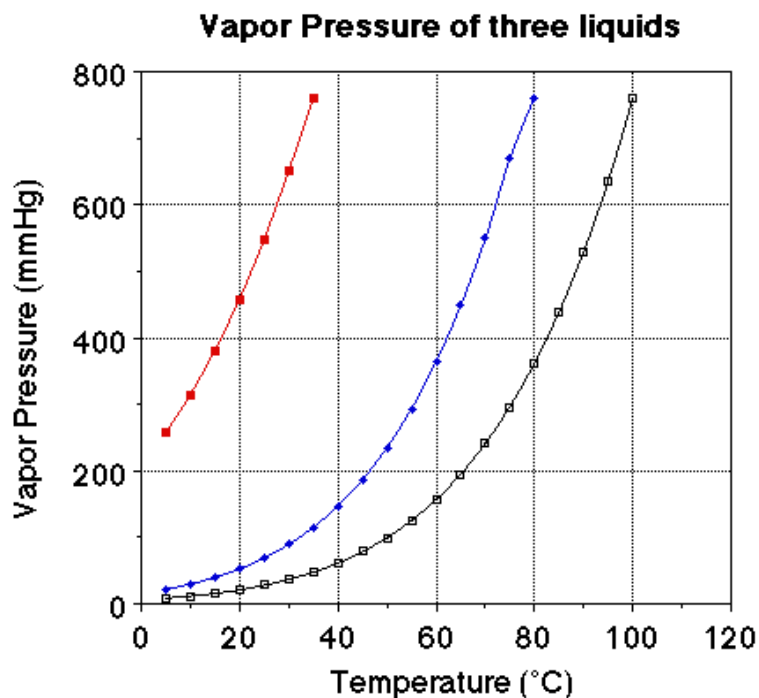
Strength of Ionic Bonds

Consider these three ionic compounds:



Which one of these has the strongest ionic bond? _____ Explain your answer.

Boiling



What are the normal boiling points of the three liquids?

Indicate which liquid has the **weakest** IMF's.