

## Review Sheet – Honors Chapter 13 Quiz

- 1) What is the difference between an atomic solid and a molecular solid?
- 2) Why are amorphous solids amorphous?
- 3) Why are liquids and solids so similar in density, while gases are much less dense?
- 4) If bonding interactions always require huge amounts of energy to break, why do compounds that are hydrogen bonded have such low melting and boiling points?
- 5) Of each of the following pairs of compounds, which would you expect would have the highest melting point?
  - a) hydrocyanic acid or acetic acid?
  - b) NaOH or PBr<sub>3</sub>?
  - c) sulfur monoxide or selenium monoxide?
- 6) Which gas would you expect would behave most like the kinetic molecular theory would predict, ammonia or sulfur benzene (C<sub>6</sub>H<sub>6</sub>)? Explain.
- 7) The aroma molecules in bacon have a molar mass of 450 g/mol and the aroma molecules in pickles have a molar mass of 125 g/mol. How much faster would the aroma molecules in pickles be expected to move across a room?
- 8) Why do chemical compounds freeze?
- 9) Why do compounds evaporate?
- 10) Why is the critical point of a phase diagram significant?
- 11) Why doesn't liquid every come pouring out of cigarette lighters? After all, they're filled with liquid butane!