

Review Sheet for Covalent Compound Quiz

Name the following compounds:

- 1) NaOH _____
- 2) PbO₂ _____
- 3) HNO₂ _____
- 4) F₂ _____
- 5) B₂O₃ _____
- 6) Mn(CO₃)₂ _____

Write the formulas of the following compounds:

- 7) dinitrogen tetroxide _____
- 8) phosphoric acid _____
- 9) sodium acetate _____
- 10) sulfur _____
- 11) iron (III) chloride _____
- 12) boron nitride _____
- 13) Explain why covalent compounds frequently have much lower boiling points than ionic compounds.

- 14) Explain why polar covalent compounds dissolve in water better than nonpolar compounds, and why ionic compounds dissolve in water better than either polar or nonpolar covalent compounds.

15) For each of the following compounds, draw the Lewis structure, determine the hybridization around the central atom (or atoms), find the bond angles around these atoms, and determine whether the molecule is polar.

- carbon disulfide

- diboron tetrahydride

- hydrosulfuric acid

- PS_3^{-1}

16) Which is more polar, nitric acid or formic acid (HCOOH)? Explain your reasoning.