

NAME _____

WORKSHOP 9A: Intermolecular Forces

Section _____

For the first part of this workshop, identify the type of crystal structure (Ionic, Molecular Polar, Molecular Nonpolar, Network-Covalent, or Metallic) present. Then determine the type of binding forces present in each (Ionic Bonds, Covalent Bonds, Metallic Bonds, London Dispersion Forces, Dipole Forces, and/or Hydrogen Bonds).

Substance	Type of Crystal	Type of Binding Force(s)
Ar		
CH ₃ Cl		
CH ₃ OH		
BCl ₃		
CH ₃ OCH ₃		
HF		
Hg		
N ₂		
SiC		
CH ₃ COOH		
Diamond		

Circle the species with the higher boiling point and *briefly* justify your choice below.

1) Kr_ Justification: _____ or Xe _____

2) C₂H₅OH _____
Justification: _____ or CH₃OCH₃ _____

3) NaF _____
Justification: _____ or MgO _____

4) N₂ _____
Justification: _____ or NO _____

5) CH₄ _____
Justification: _____ or SiH₄ _____

6) HF_ Justification: _____
or HI _____

7) CO₂ _____
Justification: _____
or NH₃ _____

8) CH₄ _____
Justification: _____
or CCl₄ _____

9) Cr_ Justification: _____
or Si _____

10) H₂O _____
Justification: _____
or SiO₂ _____

11) MgO _____
Justification: _____
or BaO _____

12) CH₃CH₂CH₂CH₂CH₃ _____
Justification: _____
or (CH₃)₂CHCH₂CH₂CH₃ _____