

LAB: THE SHAPES OF MOLECULES: PART II

Period _____

Name _____

Date _____

with _____

Due _____ (next day after lab)

TABLE 1: (USE PC-Polar, NPC-Non-polar, I-Ionic)

<u>Name</u>	<u>Molecular Formula</u>	<u>Lewis Dot Diagram</u>	<u>Structural Formula</u>	<u>Shape</u>	<u>Bond Polarity</u>	<u>Molecular Polarity</u>
Hydrogen						
Nitrogen						
Hydrogen Bromide						
Ammonia						
Carbon Dioxide						
Methane						
Water						

Questions: Use Table 1 to answer the following questions. Answer in complete sentences.

1. Which molecule(s) are non-linear?
2. Which molecule(s) form multiple (double or triple) bonds?
3. Which molecule(s) are polar?

LAB: THE SHAPES OF MOLECULES: PART II continued.....

Period _____

Name _____

Date _____

with _____

Due _____ (next day after lab)

TABLE 2: Write the electronegativity differences for each bond given below:**Then arrange the bonds in order from the most nonpolar to the most ionic: (Math ONLY)**

<u>H-F</u>	<u>H-Cl</u>	<u>H-Br</u>	<u>H-I</u>	<u>Na-F</u>	<u>Na-Cl</u>	<u>Na-Br</u>	<u>Na-I</u>	<u>Mg-O</u>	<u>Ca-S</u>
<u>Sr-Se</u>	<u>Ba-Te</u>	<u>Ca-F₂</u>	<u>Ca-Cl₂</u>	<u>Ca-Br₂</u>	<u>Ca-I₂</u>	<u>CO₂</u>	<u>SCl₂</u>	<u>OF₂</u>	<u>BeCl₂</u>

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.

TABLE 3: COMPLETE THE TABLE BELOW USING WHAT YOU HAVE LEARNED.

<u>Chemical Formula</u>	<u>Bond Polarity</u>	<u>Molecular Polarity</u>	<u>Molecular Shape</u>
1. NaCl			
2. CF ₄			
3. CHF ₃			
4. C ₂ H ₂			
5. KI			
6. H ₂ O			
7. SO ₂			
8. CO ₂			
9. C ₂ H ₆			
10. CH ₄			