Dougherty Valley HS Chemistry
Bonding and Structure – Mixed Practice

Worksheet #8

Name: **Period:** **Seat#:**

Answer the following questions:

1) What are the common exceptions to the octet rule?	**2)** Which compound has the most ionic character? Explain why. (Think about what periodic trend causes a compound to be ionic in the first place.) LiCl vs. LiF	
3) What kind of bond is likely to form if the atoms have very similar electronegativity differences?	**4)** What type of bond is formed when electrons are delocalized and move throughout the substance?	**5)** What is the formula for Mercury (I) Chloride?
6) If an unknown compound XY has an electronegativity difference of 1.0, what type of bond is it?	**7)** Using the information in Question #6 and the information below, what must the unknown compound XY be? N = 3.0; O = 3.4 C = 2.5; Cl = 3.2; H =2.2	**8)** Do atoms form bonds because they are moving towards higher or lower potential energy?

Provide the information asked for:

1) Sodium Oxide *Type of bond:* *Formula:* *Lewis Structure:*	**2)** Iodine gas *Type of bond:* *Formula:* *Lewis Structure:*
3) Hydrogen cyanide *Type of bond:* *Formula:* *Lewis Structure:*	**4)** Iodine trifluoride *Type of bond:* *Formula:* *Lewis Structure:*

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5) NH_4^+ *Type of bond:* *Name:* *Lewis Structure:*	**6)** PCl_5 *Type of bond:* *Name:* *Lewis Structure:*
7) C_2H_2 *Type of bond:* *Name:* *Lewis Structure:*	**8)** XeF_4 *Type of bond:* *Name:* *Lewis Structure:*
9) CH_3OCH_3 *Type of bond:* *Name: Dimethyl ether* *Lewis Structure:*	**10)** CH_3COCH_3 *Type of bond:* *Name: Acetone* *Lewis Structure:*
11) ClF_2^+ *Type of bond:* *Name:* *Lewis Structure:*	**12)** CH_3Cl *Type of bond:* *Name: Methyl chloride* *Lewis Structure:*