Name	Period
Bonding Homework	
1) What is a covalent bond?	
2) What is an ionic bond?	
3) What is a polar-covalent bond?	
4) If a metal bonds with a non-metal what type of bond forms?	
5) If a non-metal bonds with another non-metal what type of bond forms?	
6) What are the general properties of a compound that has an ionic bond?	
7) What are the general properties of a compound that has a covalent bond	1?
8) What are the general properties of a compound that has a polar-covaler	nt bond?
9) Provide one example each for a compound that is ionic, covalent, and p	oolar covalent.
10) Explain the difference in the overall structure of a compound that is in that is covalent?	onic versus one

11) Draw a picture of what a sodium chloride lattice looks	like.
--	-------

12) The following is a table of Pauling electronegativity values. We can use these values to determine if a bond is ionic, covalent, or polar covalent.

2.1																
Н		_														
1.0	1.5											2.0	2.5	3.0	3.5	4.0
Li	Be											В	C	N	O	F
0.9	1.2											1.5	1.8	2.1	2.5	3.0
Na	Mg											Al	Si	P	S	Cl
0.8	1.0	1.3	1.5	1.6	1.6	1.5	1.8	1.8	1.8	1.9	1.6	1.6	1.8	2.0	2.4	2.8
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br
0.8	1.0	1.2	1.4	1.6	1.8	1.9	2.2	2.2	2.2	1.9	1.7	1.7	1.8	1.9	2.1	2.5
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I
0.7	0.9		1.3	1.5	1.7	1.9	2.2	2.2	2.2	2.4	1.9	1.8	1.8	1.9	2.0	2.2
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	T1	Pb	Bi	Po	At
0.7	0.9		<u> </u>	•			<u> </u>				<u> </u>					
Fr	Ra															

Calculate the electronegativity difference for each species and identify the type of bond that forms in the species.

Compound	Electronegativity Difference	<b>Type of Bond</b>
a. HCl		
b. MgF <sub>2</sub>		
c. CO <sub>2</sub>		
d. Br <sub>2</sub>		
e. CO <sub>2</sub>		
a. HF		
b. NaF		
c. IF <sub>7</sub>		
d. O <sub>2</sub>		
e. NO <sub>2</sub>		