

**Make up tests: Come at lunch and after school to take missing tests. No appointment necessary.**

**Test 5**

**RC, sd, sl, AJ,**

**Test 6**

**CC, na, sd, id, rh, fj, jm, bs, as, MA, KF, AJ, SK**

**Test 7**

**JDV, KE, DS, na, ab, rh, aj, sl, ts, bt, JC, KF, TI, AJ, SK, FP**

**Last day for late anything is a week from tomorrow (June 5).**



**The Final Exam is the second week of June. Start making your cheat sheet. It must be one sided, hand written, 8½" x 11"**

**The Final Exam covers second semester only.**

**I will post a jumbo review packet online this Sunday at [genest.weebly.com](http://genest.weebly.com). We will be teaching new material every day. Next Week we will also start reviewing.**

Bring your textbook back! This counts as a ten point homework assignment.

10 pts if you bring back your book this week

7 pts if any day next week.

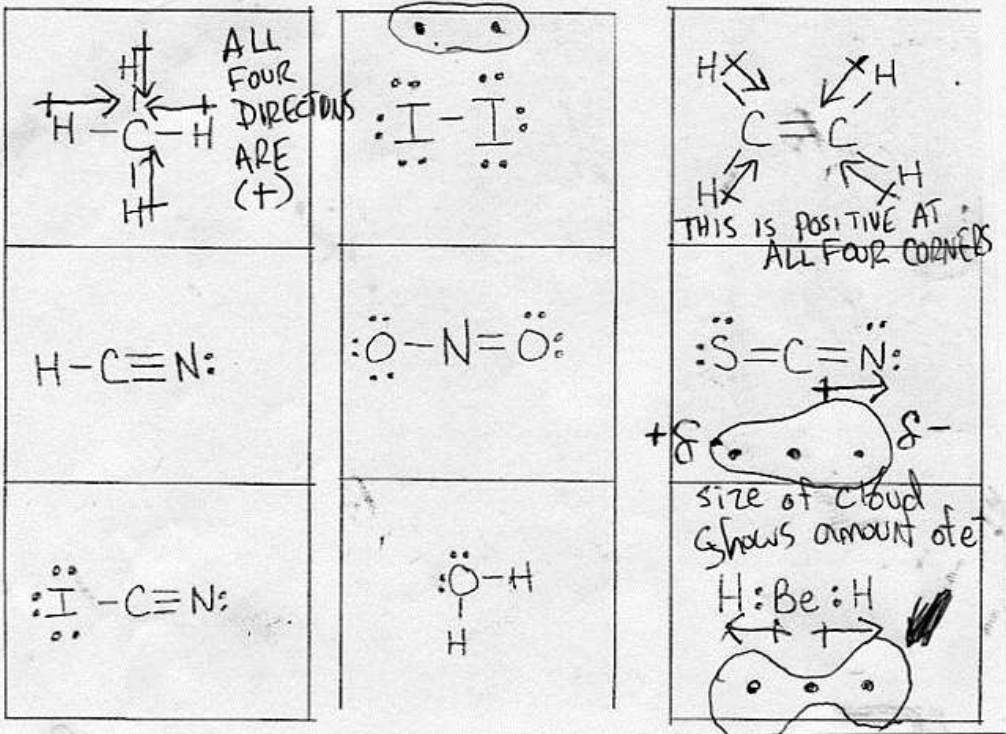
warmup to glue into notes

Purpose

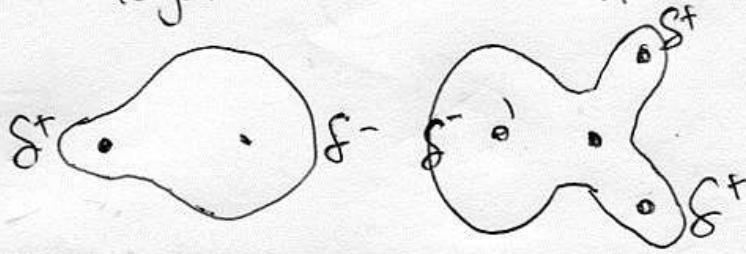
How Do WE ADD UP THE POLAR BONDs TO FIND THE POLARITY OF THE MOLECULE?

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Warmup:

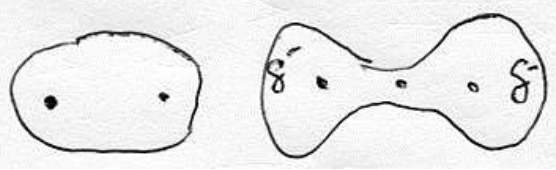


A POLAR MOLECULE HAS  
one end that's more  
negative than the opposite



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A NON POLAR MOLECULE  
HAS ITS CHARGES THE  
SAME ON OPPOSING ENDS



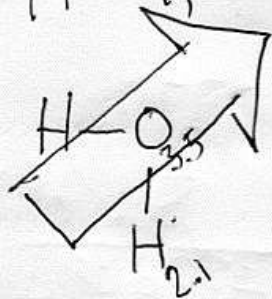
PURPOSE: WHY IS  $\text{CO}_2$   
A NONPOLAR MOLECULE?

(#1)

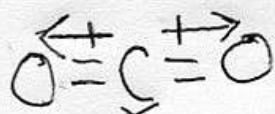
A POLAR MOLECULE HAS  
AN END WITH MORE NEGATIVE  
CHARGE OPPOSITE AN END  
WITH ~~NEGATIVE~~ LESS  
NEGATIVE CHARGE.

$\text{H}-\text{F}$  polar molecule

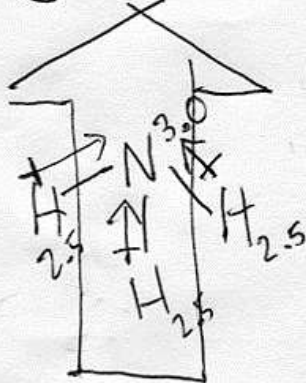
$\text{H}-\text{H}$  non polar molecule



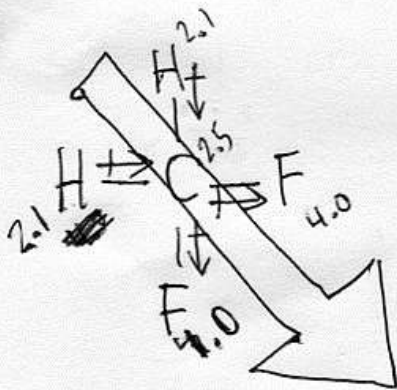
polar molecule



non polar molecule



polar molecule




polar molecule

# hints for tonight's homework:

**Chemistry** <http://genest.weebly.com>  
Stop in for help every day at lunch and Tues, Wed, & Thurs after school.  
After-school questions? Email me at home: [genest@charlottesville.k12.va.us](mailto:genest@charlottesville.k12.va.us)

**dipole molecules**

Name \_\_\_\_\_  
Period \_\_\_\_\_



1. Which element in PERIOD 3 has the least electronegativity?

2. Determine whether each molecule is a dipole by doing the following steps:  
a. look up the electronegativity number on your chart from Thursday. Write this number next to each atom in your molecule (this step is optional)  
b. draw an arrow to show the direction of polarity of each bond.  
c. draw a hollow arrow to show the overall polarity of the molecule OR write *nonpolar* below the molecule

CH4 H-C≡N H-C-H

CH3-CH3 Br-F O=C=O

# homework answers

**Polar Bonds**  
**Chemistry** - <http://genest.weebly.com>  
 Stop in for help every day at lunch and Tues, Wed, & Thurs after school!  
 After hours question? Email me at home:  
[cogans1@medison.k12.wi.us](mailto:cogans1@medison.k12.wi.us)



Name \_\_\_\_\_  
 Period \_\_\_\_\_

1. Define electronegativity in a complete sentence:

the attraction an element has for an electron in a shared bond

2. Can electronegativity be measured for a single atom floating in space? Explain in a single sentence.

NO! Because electronegativity is defined for  $e^-$  shared between two atoms

3. Why does the Periodic Table glued into your notebook not list EN's for most of the elements in Group 18?

THEY DON'T FORM BONDS

4. Which element in period 5 has the least electronegativity?

Rubidium. It is 0.8

5. Which element in Group 5 has the greatest electronegativity?

Tantalum. It is 1.5

6. The clouds at the top of p. 363, Blue Book, are for equally shared covalent, unequally shared covalent, and ionic bonds

In the middle of each square draw two widely separated dots to represent the nuclei of the two given atoms  
 write the electronegativity value next to each atom (look it up in your notebook).  
 calculate the difference of electronegativities by subtracting their e.n. values.  
 Based on this result, draw a cloud that is either symmetrical, lopsided, or really lopsided, with the fattest part of the cloud going towards the more electronegative element.

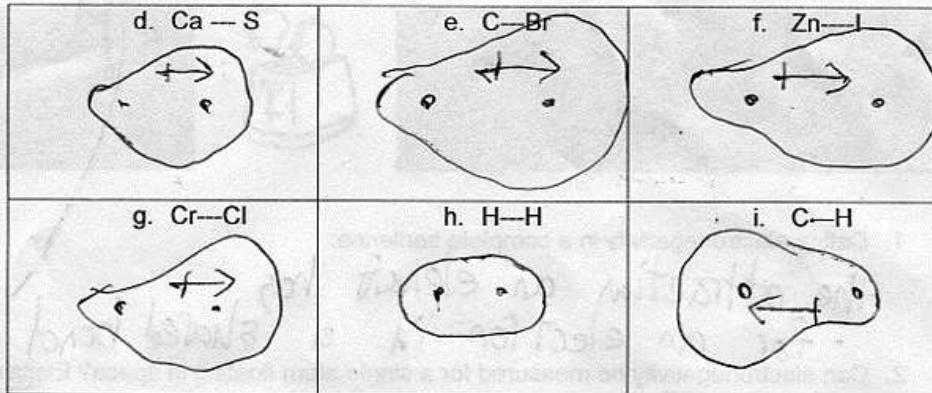
Draw an arrow, parallel to the bond, that shows the direction where the  $e^-$  density is greatest. *The first has been done as an example.*

<p>a. Li-S</p>	<p>b. Br-Br</p>	<p>c. Al-F</p>
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(no arrow)

the cloud of shared  $e^-$  in the bond is pulled more toward fluorine

Fr	Ra	Ca	Hf	Ta	Mo	Tc	Fe	Co	Ni	Cu	Zn	B	C	N	O	F	He
0.7	0.7	1.1	1.3	1.5	1.8	1.9	1.8	1.8	1.8	1.9	1.9	2.0	2.5	3.0	3.5	4.0	
Ce	Pr											Al	Si	P	S	Cl	Ne
1.1												1.5	1.8				



7. For these covalent bonded pairs, write a  $\delta^+$  or  $\delta^-$  next to each end to show where there is greater electron density according to each element's electronegativity



8. For these covalent bonded molecules, look at one covalent bond at a time. Next to each atom, write the electronegativity number (look it up in a table). Draw an arrow, parallel to each bond, that shows the direction where the e- density is greatest according to each element's electronegativity.

