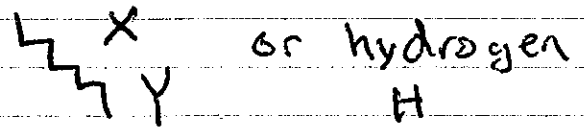


Day 23, 2017

Covalent bonding  $\equiv$

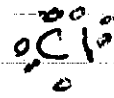
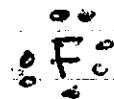
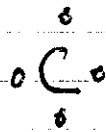
Day 3

a bond formed  
by the sharing of  
 $e^-$  between two  
atoms



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Electron dot structures



Hydrogen  
H

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Octet Rule: To become more  
stable elements will  
try to get a noble  
gas configuration

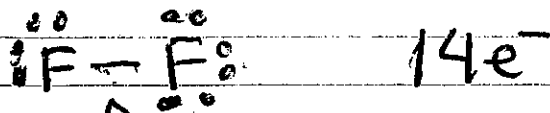
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A few examples



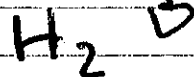
$$7 \times 2 = 14e^-$$

Electron  
Inventory

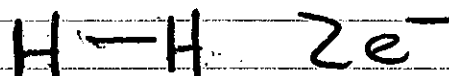


2e<sup>-</sup> shared  
covalent bond

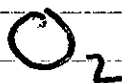
Lewis Structure



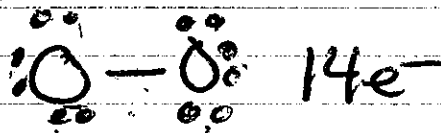
$$(1) \times 2 = 2e^-$$



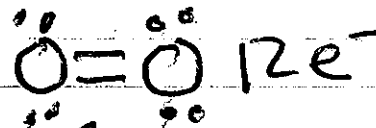
linear



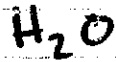
$$6 \times 2 = 12e^-$$



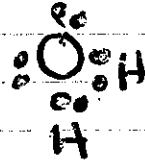
linear



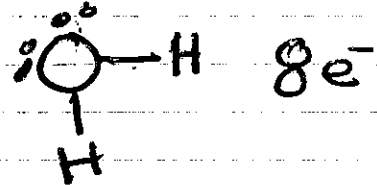
double  
bond



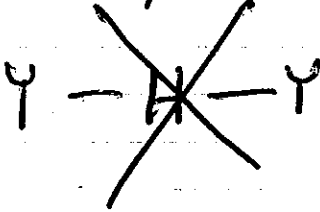
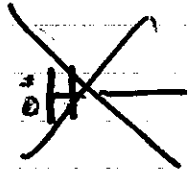
(1) 2 + 6 = 8e



Bent



Bent



wrong

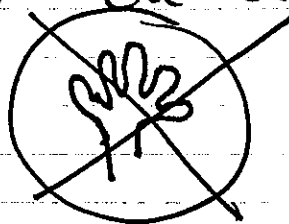
Day 4 Oct. 24  
Nomenclature of binary cpds



Carbon monoxide

Carbon dioxide

No monos on the  
1st element



1. mono

\* 6. hexa

2. di

\* 7. hepta

3. tri

8. octa

4. tetra

9. nona

5. penta

10. deca

---

dicarbon hexaoxide



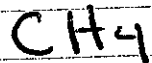
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pentasulfur octabromide

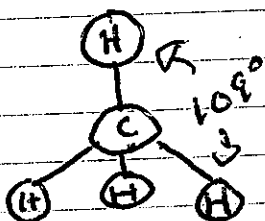
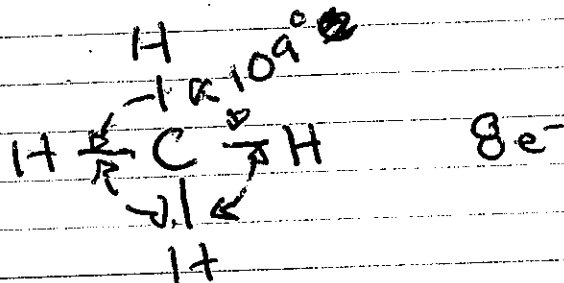


Oct 25, 2017 Day 5

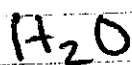
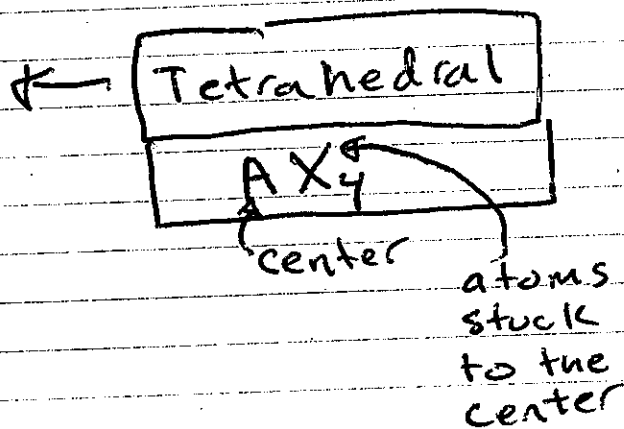
# VSEPR Theory



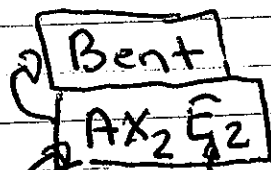
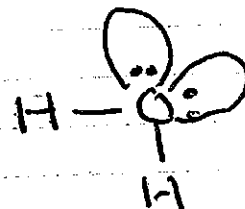
$$4 + (1)4 = 8 e^-$$



Lewis diagram



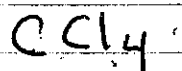
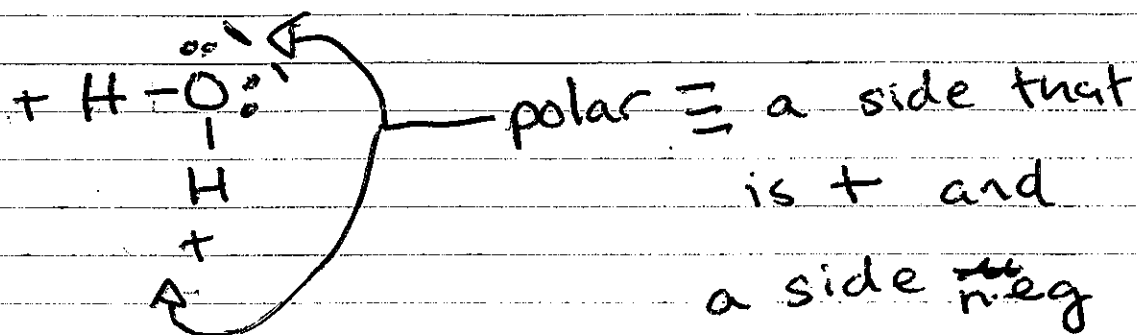
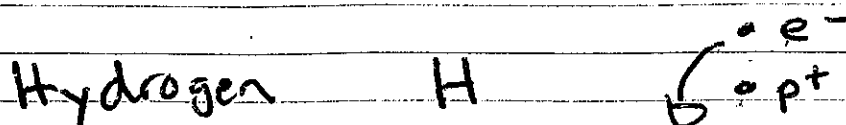
$$(1)2 + 6 = 8 e^-$$



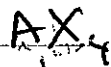
Free pair of e<sup>-</sup>

Teaching Tool

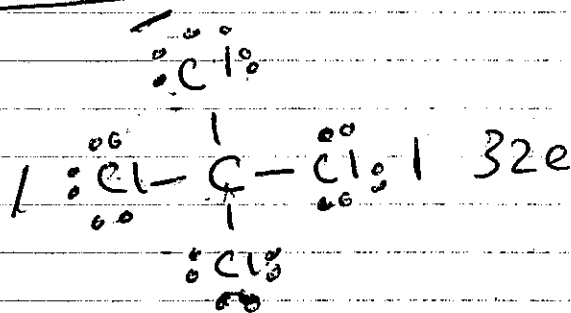
Day 6 Oct 26



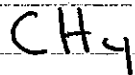
$4 + (7)4 = 32e^-$



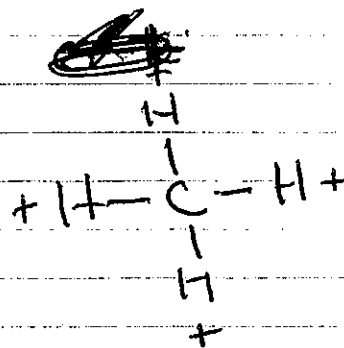
Tetrahedron



non polar

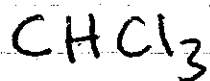


$4 + (1)4 = 8e^-$

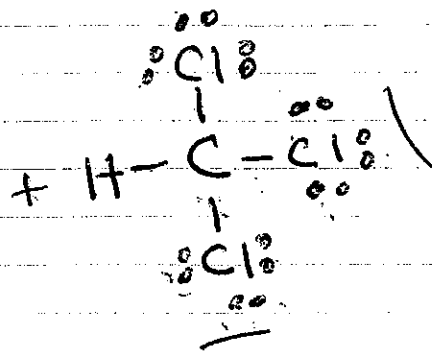


non polar

Day 6 Oct 26 continued



$4 + 1 + (7)3 = 26e^-$

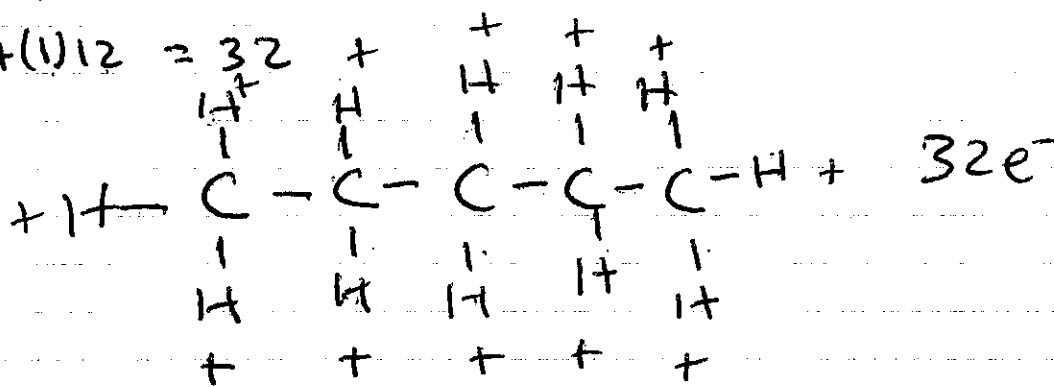


polar

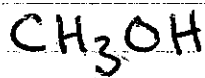
hydrocarbon



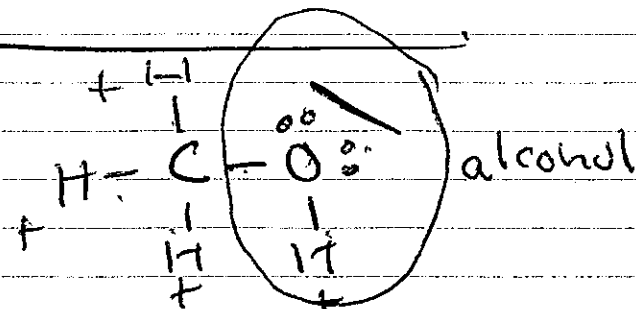
$(4)5 + (1)12 = 32$



nonpolar



$4 + (1)3 + 6 + 1 = 14e^-$

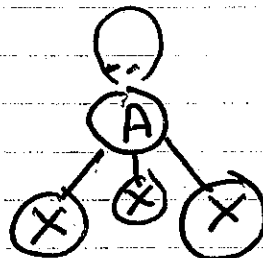
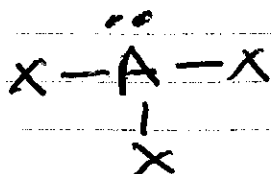


polar

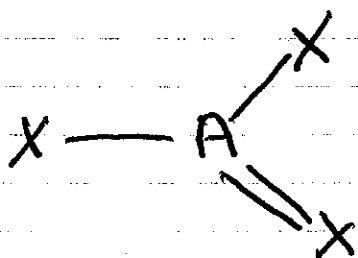
Day 7 Oct 27

VSEPR - 2 more shapes

$AX_3E_1$  - Trigonal pyramid



$AX_3$  - Trigonal planar

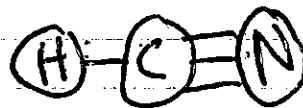
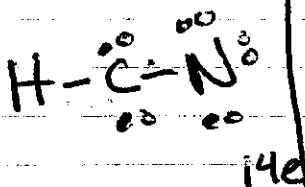


One plane ...

It is flat

H-C-N

$$1+4+5 = 10e^-$$



linear

Polar

