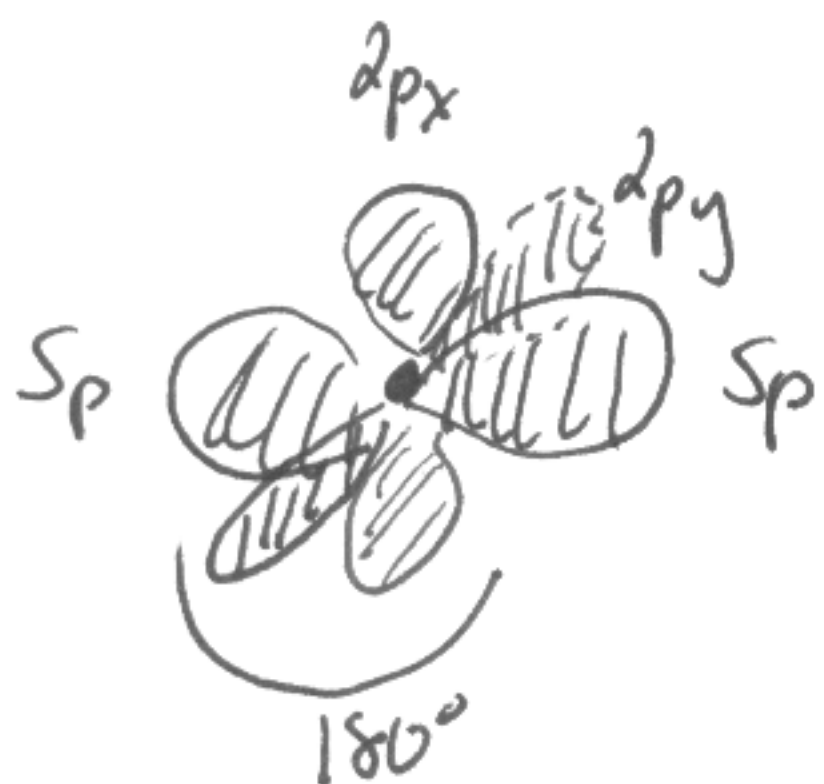


CH30114 Fall 2011

①

Homework 11 Key

1. C: $SN=2$ sp hybridized



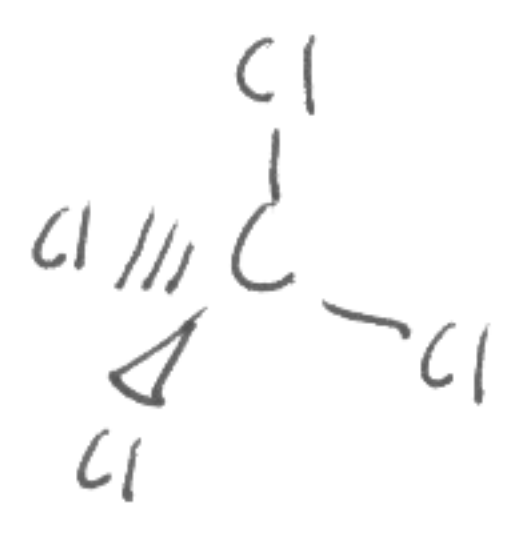
C: $SN=3$ sp^2 hybridized



C: $SN=4$ sp^3 hybridized



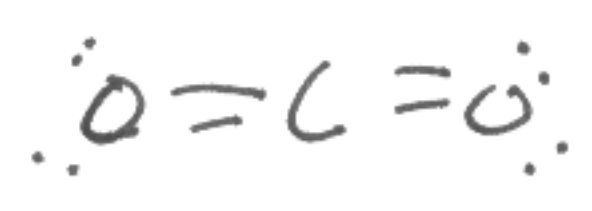
2. a) CCl₄



C: sp³

tetrahedral

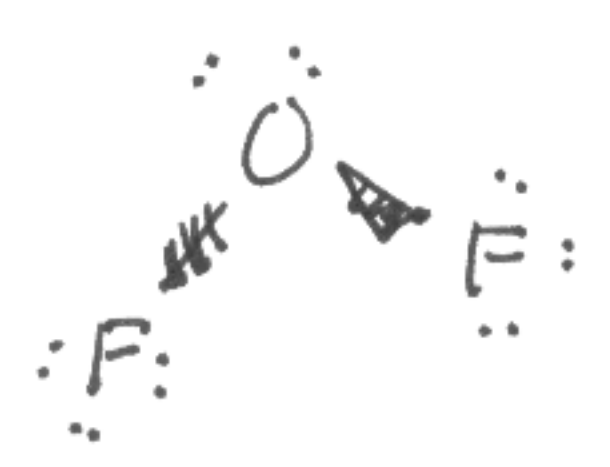
b) CO₂



C: sp

linear

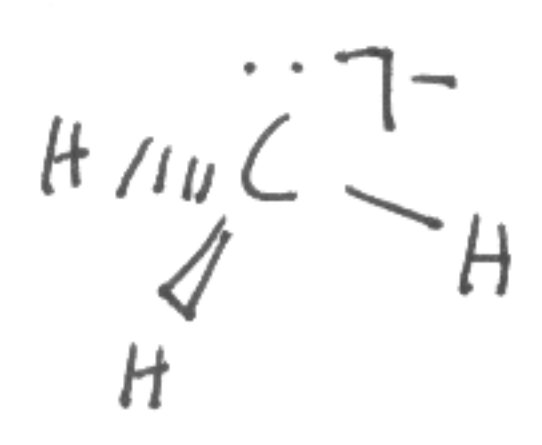
c) OF₂



O: sp³

tetrahedral

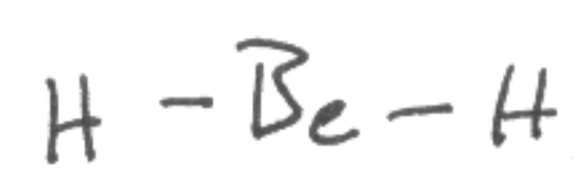
d) CH₃⁻



C: sp³

tetrahedral

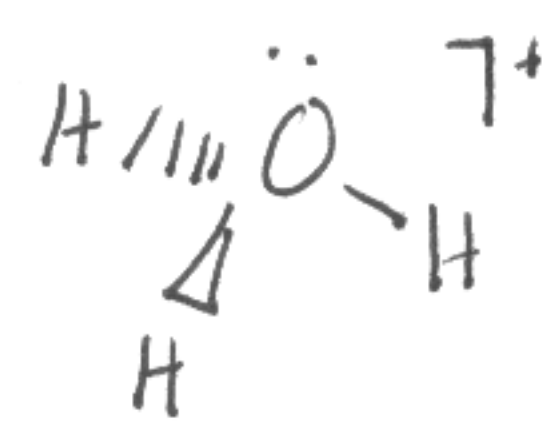
e) BeH₂



Be: sp

linear

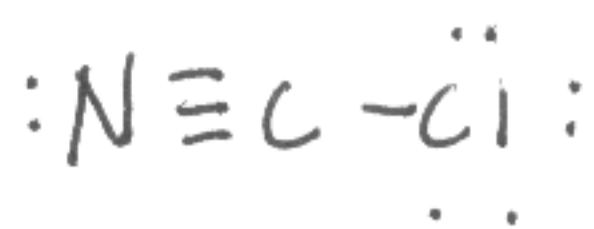
f) H₃O⁺



O: sp³

tetrahedral

3. NCCl :



3

C: sp

N: sp

Cl: doesn't matter

N

C

Cl



doesn't matter if
is hybridized - 2s
available for bonding

N

C

Cl



180°

4. CF₄ : C = sp³ hybridized

