

N18 - part B - COVALENT W/ SINGLE BONDS

(share e⁻)
 where does each atom & each e⁻ go in the structure?

STEPS

- ① count e⁻ sum ve⁻
- ② place your atoms
- ③ Bond all atoms w/ single bonds
- ④ give all atoms a full shell
- ⑤ count the # of e⁻ (dots) used
- ⑥ Fix if needed!
 - too few used
↳ put on central atom
 - too many used
↳ double / triple bonds to fix

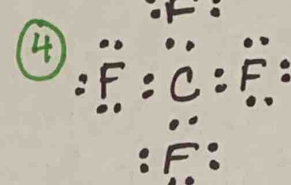
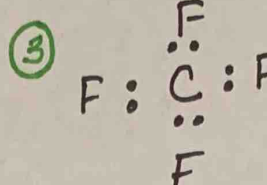
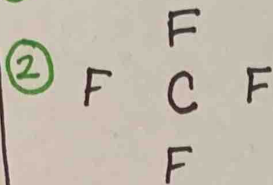
① Hydrogen goes on the outside

② Least electroneg. element goes in the center

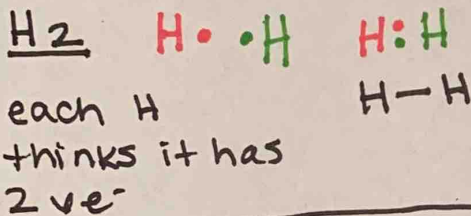
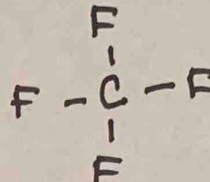
③ Symmetry is good! **Fr < F**
 least most
 When possible...

CF₄ covalent, carbon tetrafluoride

① 1(4) + 4(7) = 32 ve⁻ = 16 pairs

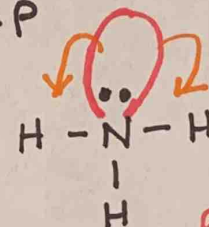
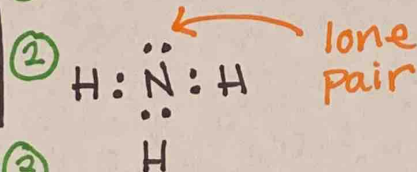


⑤ 16 pairs 32 e⁻ ✓ ☺ DONE!



NH₃

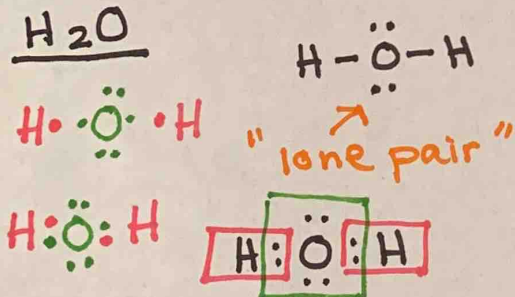
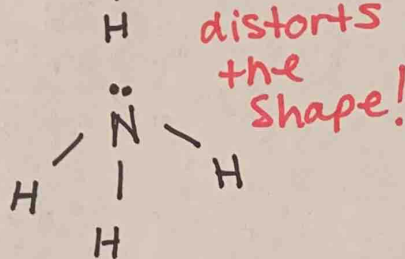
① 1(5) + 3(1) = 8 ve⁻ = 4p



③

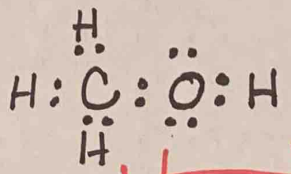
④

⑤ 4p = 8 ve⁻ ✓ ☺



H thinks it has 2 ve⁻ ✓
 O thinks it has 8 ve⁻ ✓

1(4) + 3(1) + 1(6) + 1(1)
 = 14 ve
 = 7p



7p ✓ ☺
 DONE!



"chunked" formula → hint to the structure!

2 lone pairs

