

STEPS:

- 1) Count up valence electrons of all atoms in molecule. (Make sure you have all NONMETALS.)
- 2) Locate central atom (least electronegative usually).
- 3) Arrange other atoms around central atoms with single bonds.
- 4) Use lone pairs to fill in any incomplete octets. (check to make sure each atom has exactly an octet)
- 5) Count up electrons in drawn structure, compare to original amount of valence electrons available.
- 6) If too many electrons are in drawn structure, try double or triple bonds until electron number matches.

You try: (single bonds only)

Formula: F₂

VE:

Formula: HI

VE:

Formula: CH₄

VE:

Formula: OCl₂

VE:

Formula: H₂S

#VE:

Formula: CF₄

#VE:

Formula: NH₃

#VE:

Formula: SiCl₄

#VE:

You try: single and double bonds: (carbon in the middle when possible)

Formula: C₂H₄

#VE:

Formula: CO₂

#VE:

Formula: CH₂S

#VE:

Formula: ONF

#VE:

You try: single, maybe double and maybe triple bonds:

Formula: N₂

#VE:

Formula: HCN

#VE:

Formula: HCCH (C₂H₂)

#VE:

Generalities:

Carbon group likes _____ bonds and _____ lone pairs

Nitrogen group likes _____ bonds and _____ lone pairs

Oxygen group likes _____ bonds and _____ lone pairs

Fluorine group likes _____ bonds and _____ lone pairs