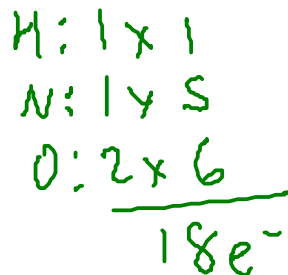


- ① Count valence electrons
- ② Pick central atom and draw skeletal structure
 - central atom is usually the one that needs to gain the most electrons!
 - skeletal structure has all atoms connected to center with single bonds
- ③ Distribute remaining valence electrons around structure, outer atoms first. Follow octet rule until you run out of electrons.
- ④ Check octet rule - each atom should have a share in 8 electrons (H gets 2). If not, make double or triple bonds.



In oxyacids, the acidic hydrogen atoms are attached to OXYGEN atoms in the structure!



Since this is an OXYACID, we must have at least one H attached to an O...



We run out of electrons after putting a lone pair onto NITROGEN. But nitrogen still has a share in only six valence electrons!



Unlike the carbon dioxide molecule, these oxygen atoms are in DIFFERENT environments and will bond differently to the nitrogen atom.

A DOT STRUCTURE FOR A LARGER MOLECULE

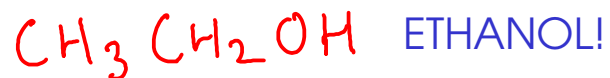
$$\begin{array}{l|l}
 \text{C} : 4 \times 2 = 8 & \\
 \text{H} : 1 \times 6 = 6 & 20 \\
 \text{O} : 6 \times 1 = 6 &
 \end{array}$$

① Count valence electrons

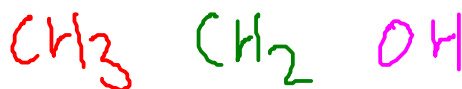
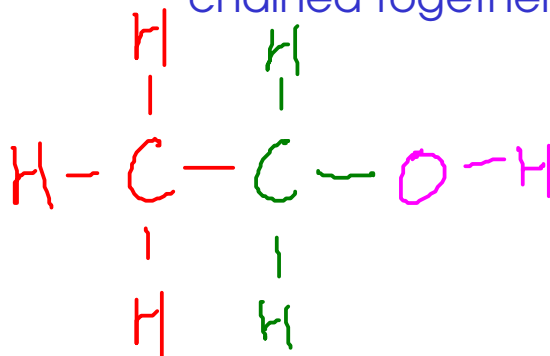
② Pick central atom and draw skeletal structure

- central atom is usually the one that needs to gain the most electrons!

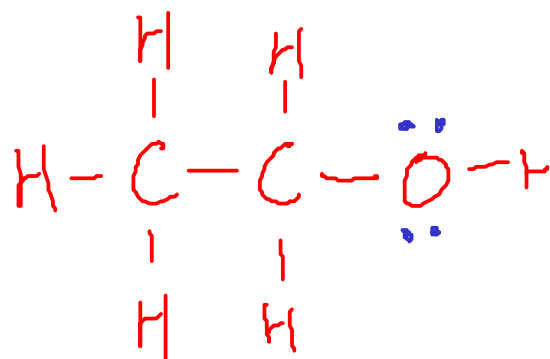
- skeletal structure has all atoms connected to center with single bonds



This formula gives us a hint to the structure of ethanol. Ethanol has THREE central atoms chained together.



③ Distribute remaining valence electrons around structure, outer atoms first. Follow octet rule until you run out of electrons.



④ Check octet rule - each atom should have a share in 8 electrons (H gets 2). If not, make double or triple bonds.