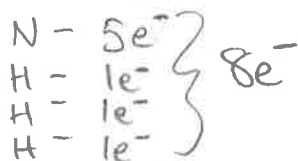


## Gen-Chem #1: Bonding & Drawing Structures

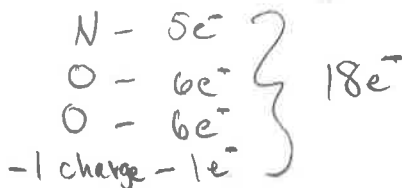
Hey all! Welcome to your very first worksheet. So here's how this works: After you finish watching a video about a certain topic, you can complete the worksheet that goes along with it to master that skill, becoming a mean, lean, organic chemistry-problem solving machine. But enough chit-chat: Let's jump in.

1.) Provide the best, most stable Lewis dot structure for each of the following molecules. Be sure to show all atoms, bonds, lone pairs, and all formal charges in your structures.

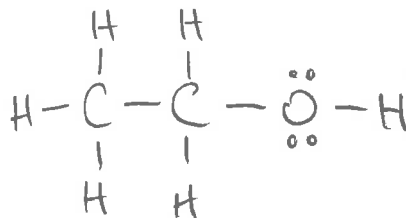
a.)  $\text{NH}_3$  (ammonium)



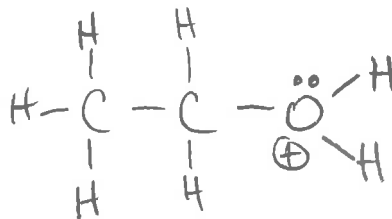
b.)  $\text{NO}_2^-$  (nitrite ion)



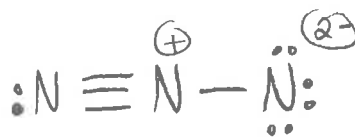
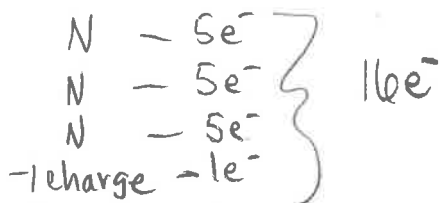
c.)  $\text{CH}_3\text{CH}_2\text{OH}$  (ethanol)



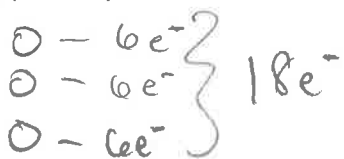
d.)  $\text{CH}_3\text{CH}_2\text{OH}_2^+$  (ethoxonium ion)



e.)  $\text{N}_3^-$  (azide ion, this one is tricky)



f.)  $\text{O}_3$  (ozone)



2.) Okay, okay, I see you: Good job. Now, try this: Below are organic (remember, organic means 'carbon-containing') structures in either Lewis Dot form or in Bond Line form. Convert all Lewis Dot reactants/products to Bond Line form, and convert all Bond Line form reactants/products to Lewis Dot form\*\*.

\*\*Sorry, if that was confusing, but here's a quick example (Bond line to Lewis Dot)\*\*:



All right, now get after it!

(PS: You'll learn eventually learn how to make these reactions happen one day)

