Lewis Structures Practice

Steps for Writing Lewis Structures

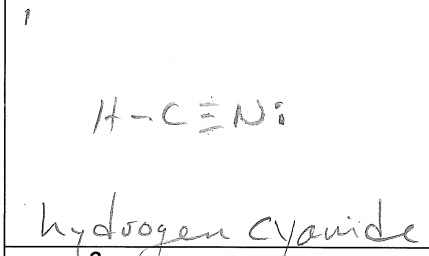
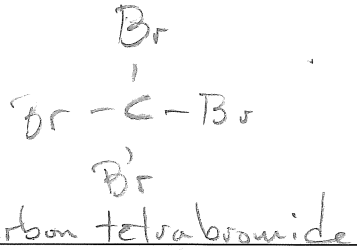
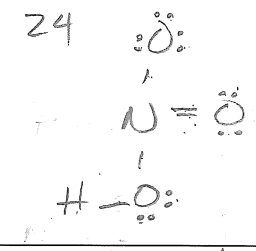
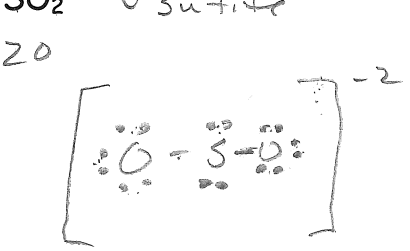
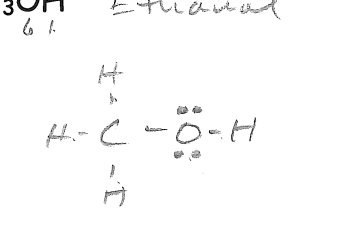
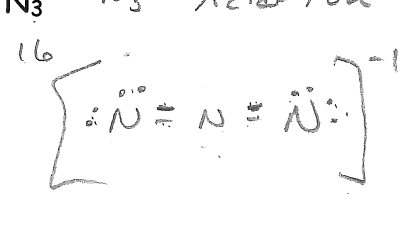
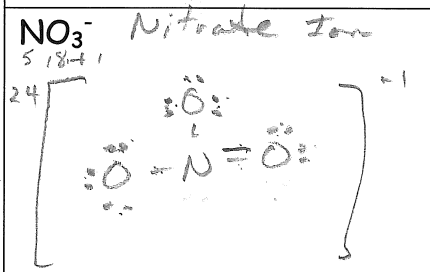
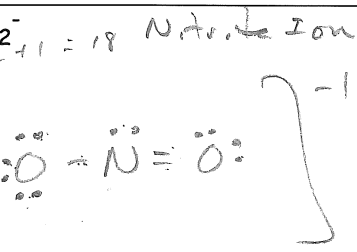
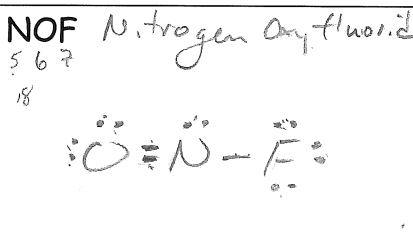
1.) Obtain the sum of the valence electrons from all of the atoms. Do not worry about keeping track of which electrons come from which atoms. It is the total number of valence electrons that is important.

2.) Identify the central atom/s (They are few in number (like only one) and can form more than one bond (NOT Hydrogen)!)

3.) Use one pair of electrons to form a bond between each pair of bound atoms. For convenience, a line (instead of a pair of dots) is often used to indicate each pair of bonding electrons.

4.) Arrange the remaining electrons to satisfy the duet rule for hydrogen and the octet rule for each second row element.

1. Name and draw the Lewis Structures for the following molecules and ions!

HCN  hydrogen cyanide	CBr_4  carbon tetrabromide	HNO_3 Nitric Acid 
SO_2^{-2} Sulfite 	CH_3OH Ethanol 	N_3^- N_3^- Azide ion 
NO_3^- Nitrate Ion 	NO_2^- Nitrite Ion 	NOF Nitrogen oxyfluoride 

FNO_2 Fluoro nitrite 7 5 12 24 there are other options	$C_2O_4^{-2}$ oxalate ion 8 26 34	$H_2PO_4^{-1}$ dihydrogen phosphate ion 2 32
ClO^- hypochlorite ion 7+16+1 = 14	ClO_2^- 33 chlorite ion 7 + 12	ClO_3^- 26 chlorate ion 7 18
ClO_4^- perchlorate ion 32 8 32	F_2 Fluorine	SF_6 Sulfur hexafluoride
H_3O^+ 8 Hydronium ion	SO_4^{-2} Sulfate ion 32	SO_3^{-2} Sulfite ion 26