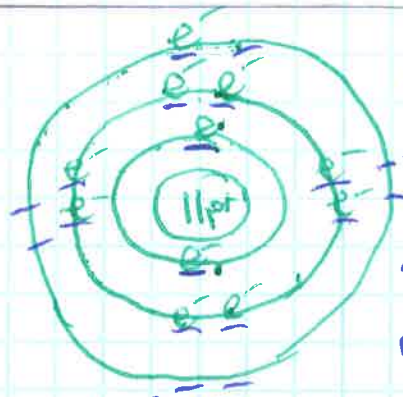
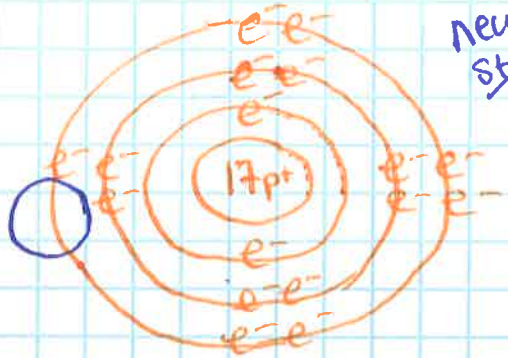
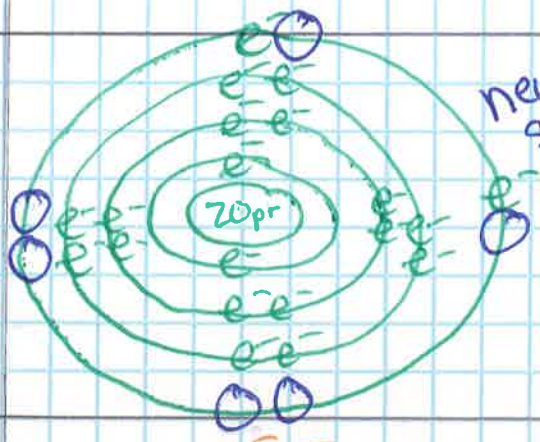
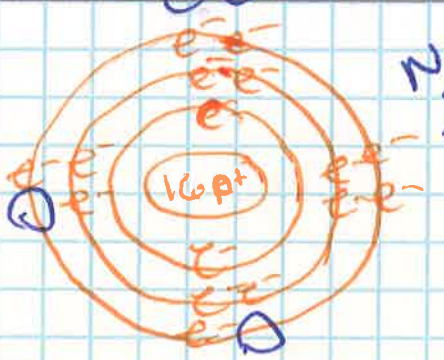
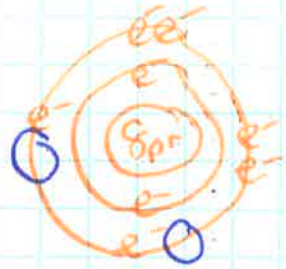
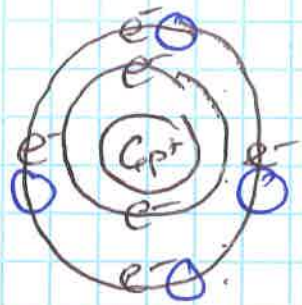
Chemical Name, # p^+ # e^-	Bohr Model Shows the general placement of e^- in an atom	# Valence e^- #e^- on the outermost shell	Dot Diagram tool show e^- as • Symbol
Sodium Na 11 p^+ 11 e^-	 1) # p^+ 2) 2 e^- in first ring 3) 1st slot, second ring 4) 2nd slot second 5) 3 & 4 repeat as needed to place all remaing e^- 1st ring: 2 e^- 2nd 3rd ring: 8 e^-	1	write symbol put • where valence e^- on Bohr diagram Na
Chlorine Cl 17 p^+ 17 e^-	 neutral state	7	* □ for spaces for this table only!!
Calcium Ca 20 p^+ 20 e^-	 neutral state	2	
Sulfur S 16 p^+ 16 e^-	 Neutral state	6	

Oxygen O 8p+ 8e-	 neutral ~~Stable~~	6	
Hydrogen H 1p+ 1e-	 neutral ~~Stable~~	1	
Carbon C 6p+ 6e-	 neutral ~~Stable~~	4	
Potassium K			

Bonding: Two types of bonds:

atoms form bonds to become <u>Stable</u>

Ionic

each atom is <u>not</u> neutral, but is stable

~~Neutral stable~~

Neutral stable

Compound

Na^+Cl^-

write charges

Covalent

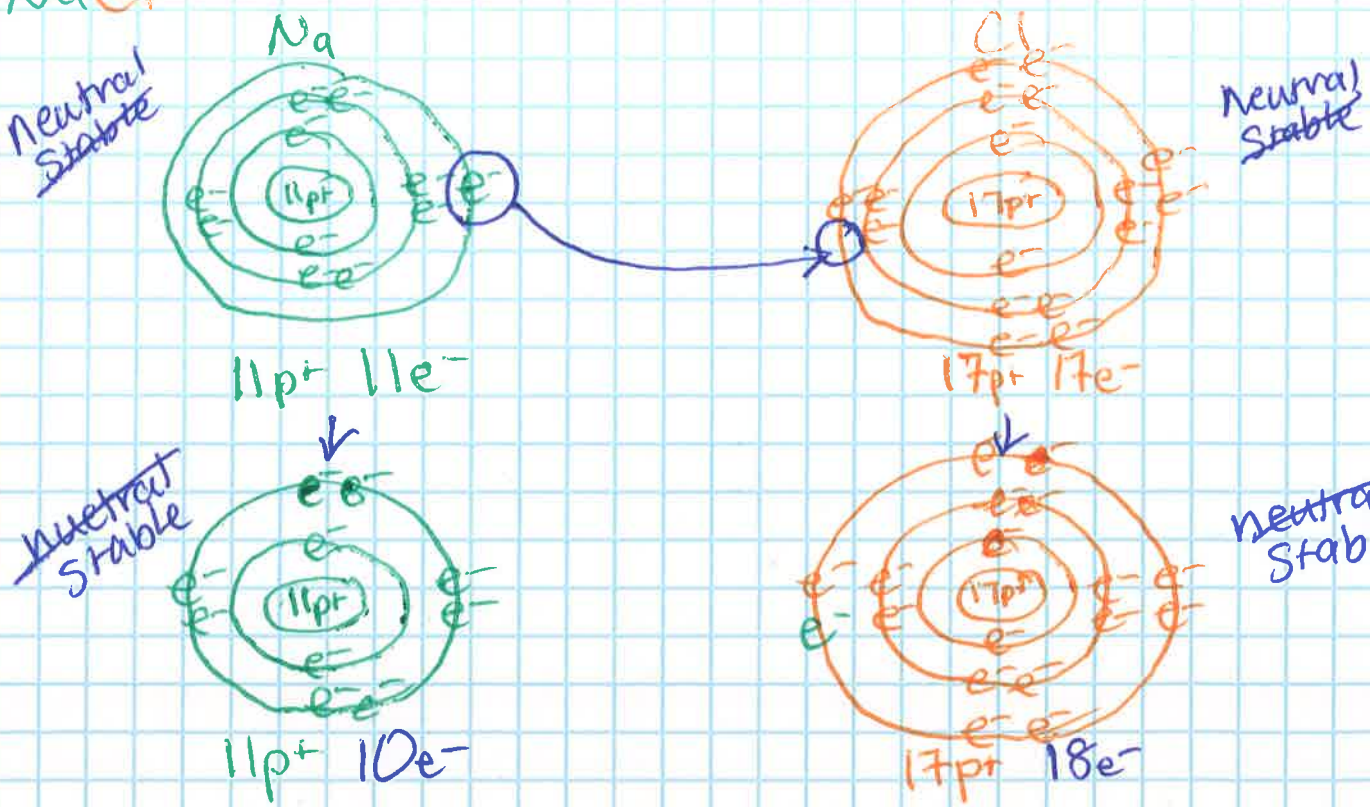
each atom is both neutral & stable

Neutral Stable

Molecule

Ionic Bonds: atoms $\boxed{\text{give up}}$ or $\boxed{\text{steal}}$ e^- to become <u>stable</u>

ex NaCl



atoms have Charge:

$\boxed{Na^+Cl^-}$ compound

11p
−10e-
1p+
↓
1+

17p
−18e-
−1e-
↓
−1

charged w/ opposites attract

Na^{1+} Na^{+1} Na^+

Cl^- Cl^{1-} Cl^{-1}

$\boxed{\text{charge} = \text{protons} - \text{electrons}}$