

**p. 187 #1-4**

H	1			
He	2			
Li	2	1		
Na	2	8	1	
K	2	8	8	1

# Ions

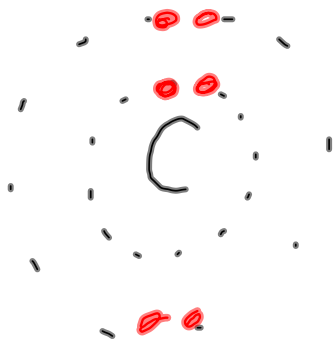
- elements are willing to give up or gain  $e^-$  in order to have the appearance of a filled outermost orbital
- when  $e^-$  are gained or lost, an atom is then called an **ion**
- **an ion is an atom with a positive or negative charge**
- the ionic charge is the numerical value of the electric charge with a plus or minus sign

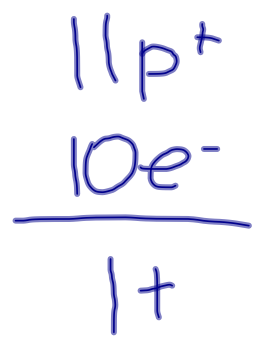
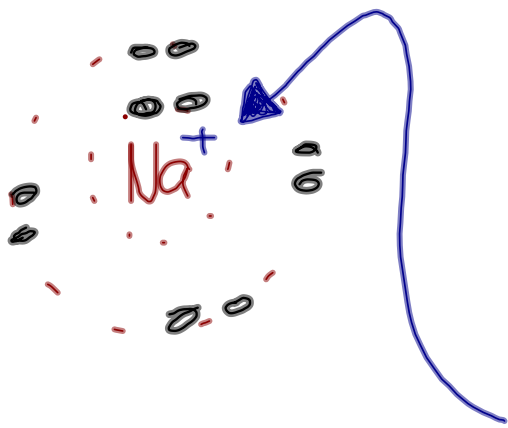
Ex. Li atom has  $3p^+$  and  $3e^-$

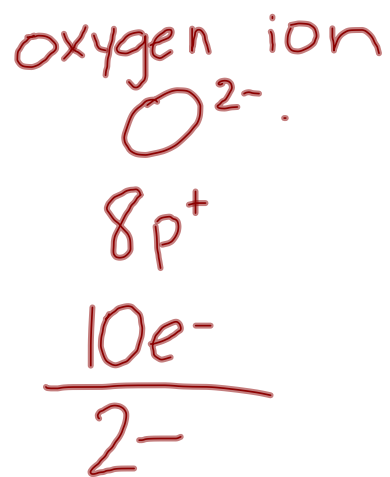
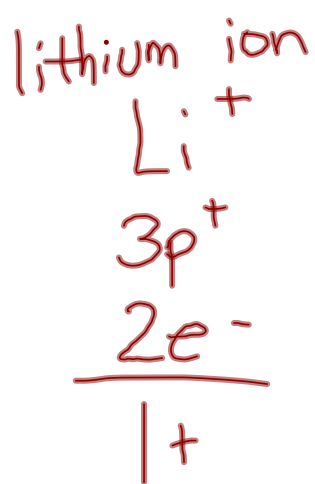
Li ion has  $3p^+$  and  $2e^-$  and is written  $Li^+$

Which groups would tend to lose electrons? Gain electrons?

- metals lose electrons to become stable  
Ex. magnesium will lose two  $e^-$  and become positively charged  
 $Mg \text{ atom} \rightarrow Mg^{2+}$
- nonmetals gain electrons to become stable  
Ex. oxygen will gain two  $e^-$  and become  
 $O \text{ atom} \rightarrow O^{2-}$







**Complete #1 p. 187**

**Complete Bohr Diagram worksheets**

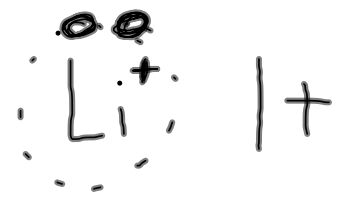
**p.187 #5-8**

lithium Li



$3p^+$   
 $3e^-$

|



$3p^+$   
 $2e^-$