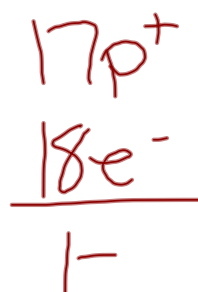
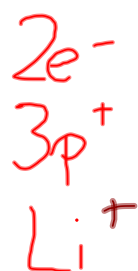
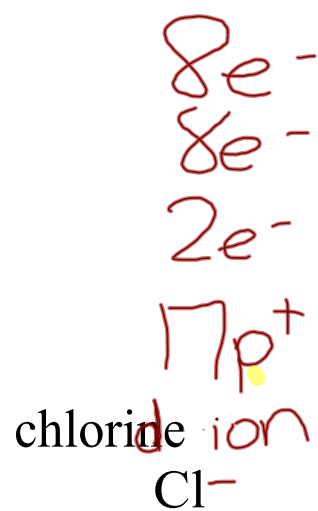
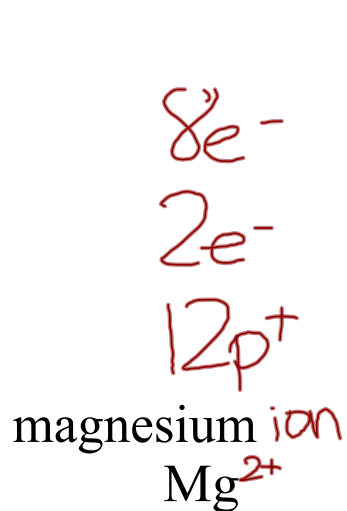


# Electron Energy Diagrams





$8e^-$   
 $2e^-$   
 $10p^+$   
Ne

## Electron Energy Diagrams

$2e^-$   
 $8e^-$   
 $2e^-$   
 $12p^+$

magnesium atom  
Mg

$7e^-$   
 $8e^-$   
 $2e^-$   
 $17p^+$

chlorine atom  
Cl

# Ions

Ion - an atom which takes on an electrical charge. Ex.  $\text{Na}^+$  or  $\text{Cl}^-$

Cations - are usually formed from metallic atoms that lose electron(s).

Ex.  $\text{Ag}^+$

- positively charged ions
- use the full english name of the atom from which it was formed followed by the word 'ion'

Ex. silver ion

Anions - are usually formed from nonmetallic atoms which have gained an electron(s).

Ex.  $\text{F}^-$

- negatively charged ions
- names of anions are formed by using the english name of the nonmetallic atom as a stem and adding the suffix -ide followed by the word ion.

Ex. fluoride ion

Name	Symbol	<sup>+</sup> Protons	<sup>-</sup> Electrons	Ionic Charge
sulfide ion	S <sup>2-</sup>	16	18	2-
tellurium atom	Te	52	52	0
nitride ion	N <sup>3-</sup>	7	10	3-

1+

1e<sup>-</sup>  
2e<sup>-</sup>  
3p<sup>+</sup>  
Li

2+

2e<sup>-</sup>  
2e<sup>-</sup>  
4p<sup>+</sup>  
Be

3+

3e<sup>-</sup>  
8e<sup>-</sup>  
2e<sup>-</sup>  
13p<sup>+</sup>  
Al

X

4e<sup>-</sup>  
2e<sup>-</sup>  
6p<sup>+</sup>  
C

1e<sup>-</sup>  
8e<sup>-</sup>  
2e<sup>-</sup>  
11p<sup>+</sup>  
Na

2e<sup>-</sup>  
8e<sup>-</sup>  
2e<sup>-</sup>  
12p<sup>+</sup>  
Mg

1'  
C

3-

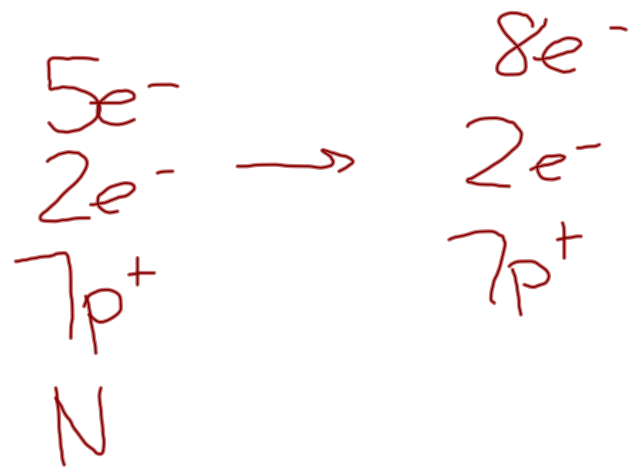
5e<sup>-</sup>  
2e<sup>-</sup>  
7p<sup>+</sup>  
N

2-  
6e<sup>-</sup>  
2e<sup>-</sup>  
8p<sup>+</sup>  
O

1-  
7e<sup>-</sup>  
2e<sup>-</sup>  
9p<sup>+</sup>  
F

X

8e<sup>-</sup>  
2e<sup>-</sup>  
10p<sup>+</sup>  
Ne





# **Today's Assignment**

## Ions Worksheet