

# Ion Practice Set

Name \_\_\_\_\_ Class # \_\_\_\_\_

1. What is an ion?

2. Use a periodic table to complete the following table.

Element Name	Ion Symbol	# Protons	# Electrons	# of Electrons Lost Or Gained
Fluorine	$F^-$	9	10	Gained one
		53	54	
		16		Gained Two
Potassium				Lost One
	$Ca^{+2}$			
		35	36	
	$Rb^+$			
Aluminum			10	
		17	18	
Lithium				Lost One
		8		Gained Two

3. If Li loses an electron to another atom, why is it written  $Li^{+1}$  (with a +1)?

4. If N gains 3 electrons from other atoms, why is it written  $N^{-3}$  (with a -3)?

5. a. What do you think happens to atomic radius (size) of a cation (positive ion) & why?

b. an anion & why?

# Isotope Practice Set

1. What is an **isotope**?

2. Fill in each chart below with information about each isotope. Assume all atoms are neutral.

	Chromium-58	Chromium-63
# protons		
# neutrons		
# electrons		

	Carbon- 12	Carbon - 16
# protons		
# neutrons		
# electrons		

3. Fill in the isotope names and any missing information, including isotope numbers. Assume all atoms are neutral.

	Iodine -	Iodine -
# protons		
# neutrons	32	35
# electrons		

# protons	32	
# neutrons	30	32
# electrons		

4. **Uranium-235** and **Uranium-238** are considered isotopes of one another. How are uranium-235 similar, and how are they different?

5. The isotope notation for **nitrogen-15** is as follows:

a. The number 15 is the \_\_\_\_\_ number.

b. The number 7 is the \_\_\_\_\_ number.

c. How many neutrons does nitrogen-15 have? \_\_\_\_\_