

Name: _____

Period: _____

Ch. 19:5

Naming and Covalent Compounds

Ion Notation

Find from number of protons



Find from p-e=charge OR

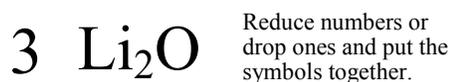
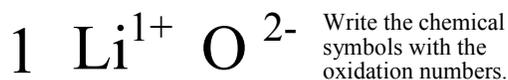
Number of electrons: (+) lost or (-) gained.

Tells you: sodium (11 protons) and
1 electron lost (+), so only 10 electrons.

How many protons and electrons does S^{2-} have?	How many electrons does K^{1+} have?	Give the ion notation for Calcium that lost 2 electrons.
Give the ion notation for an atom with 8 protons and 10 electrons.	Fe^{3+} : did it gain or lose electrons and how many?	Give the ion notation for an atom with 34 protons and 36 electrons.

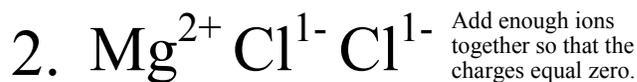
Making Ionic Compounds

Way 1



You know it is a balanced compound because $2(1) + 1(-2) = 0$. Balanced ionic compounds have a neutral charge.

Way 2



Again, you know it is a balanced compound because $1(2) + 2(-1) = 0$. Balanced ionic compounds have a neutral charge.

Make the ionic compound of magnesium oxide.	Make lithium chloride.	Combine Fe(II) and O.
Combine Iron(III) and Fluorine.	Combine sodium and carbonate (CO_3^{2-}).	Make potassium sulfate (SO_4^{2-}).

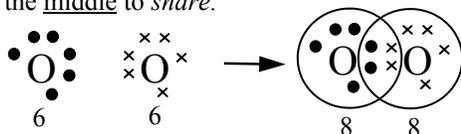
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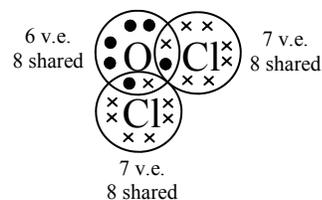
Covalent Bonding

You must fulfill two criteria when making covalent bonds:

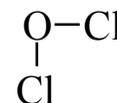
- 1) the individual atoms must have the proper number of valence electrons;
- 2) when bonded each atom must have 8 electrons through sharing.

Put the number you *need* in the middle to *share*.

Each has 6 valence electrons by itself and 8 by sharing.

Read each oxygen as 6 v.e. plus 2 for the 2 bonds = 8!A *double* covalent bond.Oxygen dichloride: OCl_2 

Short hand



Make F_2 .	Make S_2 .	Make N_2 .
Make oxygen difluoride: OF_2	Make carbon dioxide: CO_2	Make methane: CH_4 .

Naming Compounds

Ionic compounds***(metals and non-metals):***

Name the metal and non-metal and change the ending to “-ide”.

BeO: Beryllium oxideMgCl₂: Magnesium chloride.***Covalent compounds******(2 non-metals):***

Use the prefixes to show how many atoms are there.

CO: Carbon monoxideCO₂: Carbon dioxide.***Polyatomic compounds******(3 or more elements):***

Use the names on the polyatomic ion chart.

Al(PO₄): Aluminum phosphateBe(CrO₄): Beryllium chromate.1. NF₃ _____6. CS₂ _____

2. FeO _____

7. Ca₃P₂ _____3. Na₂SO₃ _____

8. NaCl _____

4. LiBr₂ _____

9. LiOH _____

5. O₂Cl₄ _____10. N₂F₃ _____