Name: _____

Period: _____

Naming and Covalent Compounds

Naming

	Type: Ionic; Covalent; Polyatomic.	Compound Name
1. $MgCl_2$	*Ionic*	*Magnesium chloride*
2. PF_3	_____	_____
3. CaO	_____	_____
4. $K_3(PO_4)_2$	_____	_____
5. $MgCl_2$	_____	_____
6. CO	_____	_____
7. S_2O_4	_____	_____
8. $Mg(CrO_4)$	_____	_____
9. NaF	_____	_____
10. H_2O	_____	_____
11. CO_2	_____	_____
12. OBr_2	_____	_____

Use only for Polyatomic Compounds

Polyatomic Ions

Oxidation #	Name	Formula
1+	ammonium	NH_4^{+}
1-	acetate	$C_2H_3O_2^{1-}$
2-	carbonate	CO_3^{2-}
2-	chromate	CrO_4^{2-}
1-	hydrogen carbonate	HCO_3^{1-}
1+	hydronium	H_3O^{1+}
1-	hydroxide	OH^{1-}
1-	nitrate	NO_3^{1-}
2-	peroxide	O_2^{2-}
3-	phosphate	PO_4^{3-}
2-	sulfate	SO_4^{2-}
2-	sulfite	SO_3^{2-}

Use only for Covalent Compounds

Greek Prefixes

Mono - 1	Hexa – 6
Di – 2	Hepta – 7
Tri – 3	Octa – 8
Tetra – 4	Nona – 9
Penta – 5	Deca – 10

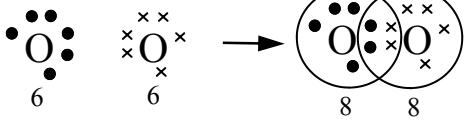
Name: _____

Period: _____

Covalent Bonding

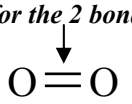
You must fulfill two criteria when making covalent bonds:
1) the individual atoms must have the proper number of valence electrons;
2) when bonded each atom must have 8 electrons through sharing.

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



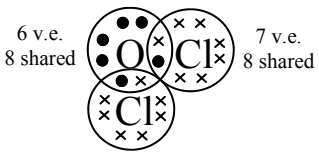
Each has 6 valence electrons by itself and 8 by sharing.

Read each oxygen as 6 v.e. plus 2 for the 2 bonds = 8!

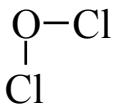


A *double* covalent bond.

Oxygen dichloride: OCl_2



Short hand



Make Cl_2.	Make O_2.	Make P_2.
Make Sulfur difluoride: SF_2	Make sulfur dioxide: SO_2	Make water.

Reviewing

Start getting ready for the test.
Know: valence electrons; oxidation numbers; metals vs. non-metals; dot diagrams; ion notation; cation versus anion; differences between ionic, covalent and polyatomic compounds; how to name compounds; how to make ionic compounds; how to make covalent compounds.

How many protons and electrons does O^{2-} have? Is it a metal or non-metal?	How many electrons does K^{1+} have? Is it a cation or an anion?	Give the ion notation for Calcium that lost 2 electrons. Cation or anion?
Make the ionic compound of Lithium oxide.	Make Iron (III) chloride.	Combine Sodium and phosphate $(PO_4)^{3-}$