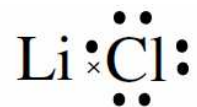
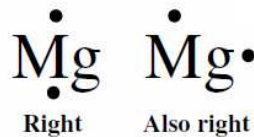
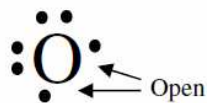
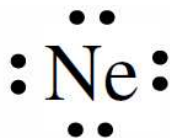


Name: \_\_\_\_\_

Period: \_\_\_\_\_

**Covalent Compounds**

**Lewis Dot Diagrams**



**Use x's or dots for different atoms**

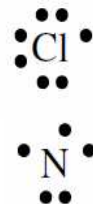
Hard to read



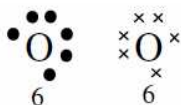
Easy to read



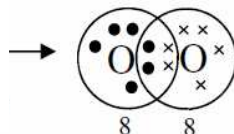
**Remember the dots are Valence Electrons**



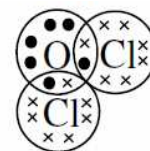
**Covalent Bonding**



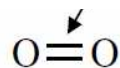
Molecular Oxygen: O<sub>2</sub>



Oxygen dichloride: OCl<sub>2</sub>



**Short Hand**



Name: \_\_\_\_\_

Unit 3:

Period: \_\_\_\_\_

1. X's	A. A bond of negatively and positively charged atoms.	1. Electrolyte	A. When 4 valence electrons are shared.
2. Covalent	B. Used instead of dots to show a different atom's valence electrons.	2. Double Bond	B. Used instead of dots to simplify the writing on bonds. Means 2 electrons.
3. Ionic	C. A bond where electrons are shared.	3. Triple Bond	C. Shows 6 valence electrons being shared.
4. Diatomic Molecule	D. Number of electrons each atom in a covalent compound has after sharing.	4. Line (—)	D. Something dissolved in water that allows electricity to flow.
5. 8 Valence Electrons	E. A molecule of two atoms of the same element.	5. Single Bond	E. Occurs when 2 valence electrons are shared in a covalent compound.

Using the short hand notation, count how many electrons the atoms have and if they have a full number of valence electrons.

$P \equiv$  # of electrons: 8 Full? Yes.

$O -$  # of electrons: \_\_\_\_\_ Full? \_\_\_\_\_

$C =$  # of electrons: \_\_\_\_\_ Full? \_\_\_\_\_

$N =$  # of electrons: \_\_\_\_\_ Full? \_\_\_\_\_

$Cl -$  # of electrons: \_\_\_\_\_ Full? \_\_\_\_\_

$=Si -$  # of electrons: \_\_\_\_\_ Full? \_\_\_\_\_

$I =$  # of electrons: \_\_\_\_\_ Full? \_\_\_\_\_

$-S -$  # of electrons: \_\_\_\_\_ Full? \_\_\_\_\_

Draw the Lewis Dot Diagram for molecular Chlorine ( $Cl_2$ ).

Short hand

Draw the Lewis Dot Diagram for molecular Oxygen ( $O_2$ ).

Short hand

Using Lewis Dot Diagrams to predict how Oxygen and Fluorine will combine.

Short hand

Using Lewis Dot Diagrams to predict how Nitrogen and Bromine will combine.

Short hand

Draw the Lewis Dot Diagrams for the following.

Draw Lewis Dot Diagrams for Lithium and Oxygen, then put them together to find how they combine.

Carbon

Magnesium

Oxygen

Helium

Lithium Oxygen

Combined

Aluminum

Argon

Lithium

Fluorine