

1. Identify the following elements as metals or nonmetals and write their Lewis structures in the row below.

Element	Al	Cl	O	Mg	Cs	P
Metal or Non metal						
Lewis Structure						

2. Write the Lewis structures of the following ions.

$\text{Li}^+$	$\text{O}^{2-}$	$\text{Mg}^{2+}$	$\text{Al}^{3+}$	$\text{N}^{3-}$	$\text{Cl}^-$

3. From the elements in question 1, pick the element pairs that will form ionic and the ones that will form covalent bonds; write the compound formed and the Lewis structure.

Ionic Bond Pairs		Lewis Structure	
Pair	Compound formed		
Covalent Bond Pairs		Lewis Structure	
Pair	Compound formed		

4. Identify what is wrong with the following Lewis structures and give the correct structure.

Structure	Explain what is wrong	Correct structure
$\text{H} - \overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{C}}} = \overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{N}}}$		
$\begin{array}{c} \text{:}\overset{\cdot\cdot}{\text{F}}\text{:} \\ \diagdown \\ \text{B} \\ \diagup \\ \text{:}\overset{\cdot\cdot}{\text{F}}\text{:} \\   \\ \text{:}\overset{\cdot\cdot}{\text{F}}\text{:} \end{array}$		
$\begin{array}{c} \text{:}\overset{\cdot\cdot}{\text{F}}\text{:} \\ \diagdown \\ \text{N} \\ \diagup \\ \text{:}\overset{\cdot\cdot}{\text{F}}\text{:} \\   \\ \text{:}\overset{\cdot\cdot}{\text{F}}\text{:} \end{array}$		
$\cdot\text{H} = \text{C} = \text{C} = \text{H}$		
$\text{H} - \overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{O}}} = \overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{F}}}\text{:}$		
$\overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{O}}} - \text{Sn} - \overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{O}}}$		
$\begin{array}{c} \text{H} \\ \diagdown \\ \text{C} - \overset{\cdot\cdot}{\underset{\cdot\cdot}{\text{F}}}\text{:} \\ \diagup \\ \text{:}\overset{\cdot\cdot}{\text{O}}\text{:} \end{array}$		