

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.

Na^+	O^{2-}	Mg^{2+}	Al^{3+}	P^{3-}	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		
Cl and O			
P and Cl			

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

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