

# Exercise 6.5c

## Ionic or Covalent – Answers

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

Date: \_\_\_\_\_ Per: \_\_\_\_\_

**DIRECTIONS:** Complete each set of cells based on the information given.

Formula: <b>CCl<sub>4</sub></b> Bond Type: <b>covalent</b> Name: <b>carbon tetrachloride</b>	Lewis Structure $\begin{array}{c} \text{:}\ddot{\text{C}}\text{:} \\ \text{:}\ddot{\text{C}}\text{---C---}\ddot{\text{C}}\text{:} \\ \text{:}\ddot{\text{C}}\text{:} \end{array}$	Formula: <b>CO<sub>2</sub></b> Bond Type: <b>covalent</b> Name: <b>carbon dioxide</b>	Lewis Structure $\ddot{\text{O}}=\text{C}=\ddot{\text{O}}$
Formula: <b>O<sub>2</sub></b> Bond Type: <b>covalent</b> Name: <b>oxygen</b>	Lewis Structure $\ddot{\text{O}}=\ddot{\text{O}}$	Formula: <b>SrCl<sub>2</sub></b> Bond Type: <b>ionic</b> Name: <b>strontium chloride</b>	Lewis Structure $[\ddot{\text{C}}\text{:}]^{-}[\text{Sr}]^{2+}[\ddot{\text{C}}\text{:}]^{-}$
Formula: <b>CO<sub>3</sub><sup>2-</sup></b> Bond Type: <b>covalent</b> Name: <b>carbonate ion</b>	Lewis Structure $\left[ \begin{array}{c} \text{:}\ddot{\text{O}}\text{:} \\ \text{  } \\ \text{:}\ddot{\text{O}}\text{---C---}\ddot{\text{O}}\text{:} \\ \text{:}\ddot{\text{O}}\text{:} \end{array} \right]^{2-}$	Formula: <b>H<sub>2</sub>O<sub>2</sub></b> Bond Type: <b>covalent</b> Name: <b>dihydrogen dioxide</b>	Lewis Structure $\text{H}-\ddot{\text{O}}-\ddot{\text{O}}-\text{H}$
Formula: <b>NCl<sub>3</sub></b> Bond Type: <b>covalent</b> Name: <b>nitrogen trichloride</b>	Lewis Structure $\begin{array}{c} \text{:}\ddot{\text{C}}\text{---}\ddot{\text{N}}\text{---}\ddot{\text{C}}\text{:} \\   \\ \text{:}\ddot{\text{C}}\text{:} \end{array}$	Formula: <b>SnCl<sub>4</sub></b> Bond Type: <b>ionic</b> Name: <b>tin (IV) chloride</b>	Lewis Structure $\begin{array}{c} [\ddot{\text{C}}\text{:}]^{-} \\ [\ddot{\text{C}}\text{:}]^{-}[\text{Sn}]^{4+}[\ddot{\text{C}}\text{:}]^{-} \\ [\ddot{\text{C}}\text{:}]^{-} \end{array}$
Formula: <b>PI<sub>3</sub></b> Bond Type: <b>covalent</b> Name: <b>phosphorus triiodide</b>	Lewis Structure $\begin{array}{c} \text{:}\ddot{\text{I}}\text{---}\ddot{\text{P}}\text{---}\ddot{\text{I}}\text{:} \\   \\ \text{:}\ddot{\text{I}}\text{:} \end{array}$	Formula: <b>SF<sub>2</sub></b> Bond Type: <b>covalent</b> Name: <b>sulfur difluoride</b>	Lewis Structure $\text{:}\ddot{\text{F}}\text{---}\ddot{\text{S}}\text{---}\ddot{\text{F}}\text{:}$
Formula: <b>K<sub>2</sub>O</b> Bond Type: <b>ionic</b> Name: <b>potassium oxide</b>	Lewis Structure $[\text{K}]^{+}[\text{:}\ddot{\text{O}}\text{:}]^{2-}[\text{K}]^{+}$	Formula: <b>MgI<sub>2</sub></b> Bond Type: <b>ionic</b> Name: <b>magnesium iodide</b>	Lewis Structure $[\text{:}\ddot{\text{I}}\text{:}]^{-}[\text{Mg}]^{2+}[\text{:}\ddot{\text{I}}\text{:}]^{-}$
Formula: <b>MgS</b> Bond Type: <b>ionic</b> Name: <b>magnesium sulfide</b>	Lewis Structure $[\text{Mg}]^{2+}[\text{:}\ddot{\text{S}}\text{:}]^{2-}$	Formula: <b>N<sub>2</sub>O<sub>4</sub></b> Bond Type: <b>covalent</b> Name: <b>dinitrogen tetroxide</b>	Lewis Structure $\begin{array}{c} \text{:}\ddot{\text{O}}\text{:} \quad \text{:}\ddot{\text{O}}\text{:} \\ \diagdown \quad \diagup \\ \text{N} \text{---} \text{N} \\ \diagup \quad \diagdown \\ \text{:}\ddot{\text{O}}\text{:} \quad \text{:}\ddot{\text{O}}\text{:} \end{array}$
Formula: <b>NCO<sup>-</sup></b> Bond Type: <b>covalent</b> Name: <b>cyanate ion</b>	Lewis Structure $\left[ \begin{array}{c} \text{:}\ddot{\text{O}}\text{:} \\   \\ \text{:}\ddot{\text{O}}\text{---C}\equiv\text{N:} \end{array} \right]^{-}$	Formula: <b>NaOH</b> Bond Type: <b>ionic &amp; covalent</b> Name: <b>sodium hydroxide</b>	Lewis Structure $[\text{Na}]^{+}[\text{:}\ddot{\text{O}}\text{---H}]^{-}$