

Revision Sheet #3 | Lower Secondary Stage (6-8)

1st Semester | 2023-2024

Subject: Chemistry

Chapter 2: Covalent bonds

Objectives:

- Define covalent bonds
- Explain how covalent bonds are formed
- Use Lewis structure to represent covalent bonds

1. Describe how a covalent bond forms.

In covalent bonds, valence electrons are shared between atoms.

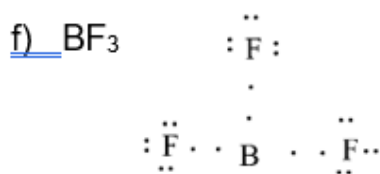
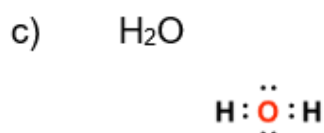
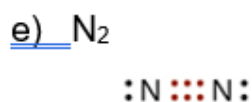
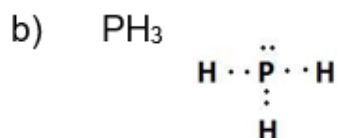
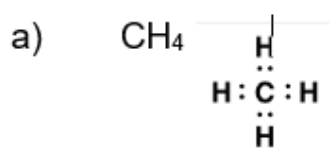
2. Covalent bonds form between what kinds of elements?

Non-metals

3. For each element, draw the Lewis dots diagram (based on valence electrons).



4. For each compound, draw the Lewis dot diagram.



Types of Chemical Bonds

- Classify the following as ionic (metal + nonmetal) or covalent (nonmetal + nonmetal).
- Determine the charge for each element or polyatomic ion in each ionic compound.

| | |
|--|---|
| 1. CaCl ₂ ionic/ Ca⁺² Cl⁻¹ | 2. MgO ionic/ Mg⁺² O⁻² |
| 1. CO ₂ covalent | 2. HCl covalent |
| 3. H ₂ O covalent | 3. KI ionic/ K⁺¹ I⁻¹ |
| 4. K ₂ O ionic/ K⁺¹ O⁻² | 5. NO ₂ covalent |