

19S_CHEM110_67M - INTRODUCTORY CHEMISTRY LAB

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Question name

 (REQUIRED)

Molecular Structure 01 - Interpreting Lewis Structures

Question text

 (REQUIRED)

 Paragraph      



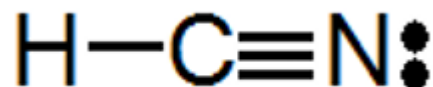
Interpreting Lewis Structures. A Lewis structure is a visual representation of how the atoms are connected and how the valence electrons are distributed in a molecule or polyatomic ion. When atoms form covalent bonds, only the valence (or outermost) electrons are involved.

- each atom is represented by its symbol.
- valence electrons are represented by dots or lines.
- each dot represents one valence electron.
- a dash or line is equivalent to dots.
- lines or dots drawn between symbols of two atoms represent valence electrons shared by the two atoms.

Answer the questions below. You may find it useful to watch the following video first.

<https://youtu.be/eX8sy5jFPro>

Consider the Lewis structure for HCN as shown below:



How many valence electrons are shared between C and N? {1:SA:%100%6~%100%six}

How many valence electrons are shared between H and C? {1:SA:%100%2~%100%two}

How many valence electrons are unshared? {1:SA:%100%2~%100%two}

What is the total number of valence electrons shown? {1:SA:%100%10~%100%ten}

Of all the electrons that this molecule has, how many are not shown in the Lewis structure? {1:SA:%100%4~%100%four}

A pair of electrons shared between two atoms is called a bonding pair while an unshared pair of electrons is called a lone pair. In a Lewis structure for HCN above,

Which two atoms are linked by a single bond? {1:MC:%100%H and C~H and N~C and N~none}

Which two atoms are linked by a double bond? {1:MC:H and C~H and N~C and N~%100%none}

Which two atoms are linked by a triple bond? {1:MC:H and C~H and N~%100%C and N~none}

How many bonding pairs are there? {1:SA:%100%4~%100%four}

Which atom has a lone pair? {1:MC:H~C~%100%N}

Path: p » strong

General feedback ?

 Paragraph







Path: p

Decode and verify the question text



This question is used in 1 quiz(s), total attempt(s) : 23

Multiple tries

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