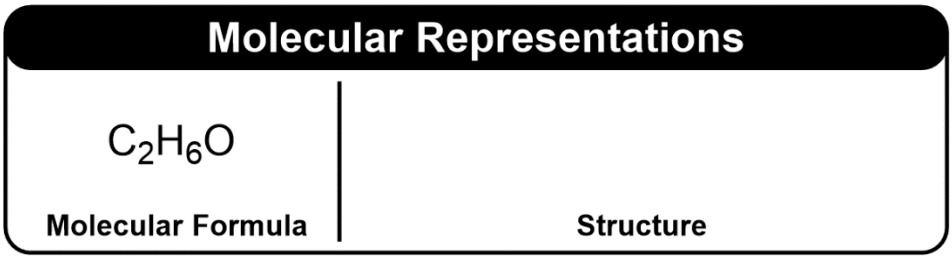
CONCEPT: STRUCTURAL FORMULA

- Molecular formulas are insufficient for organic compounds because they do not convey _____ _____.
  - □ **Structural Information:** connectivity and orientation.
    - **Connectivity:** how atoms are connected to each other.
    - **Orientation:** will be discussed later.



EXAMPLE: Which of the following statements is incorrect about molecular formulas and molecular structures?

a) Molecular formula and structure show which atoms are present in a molecule.

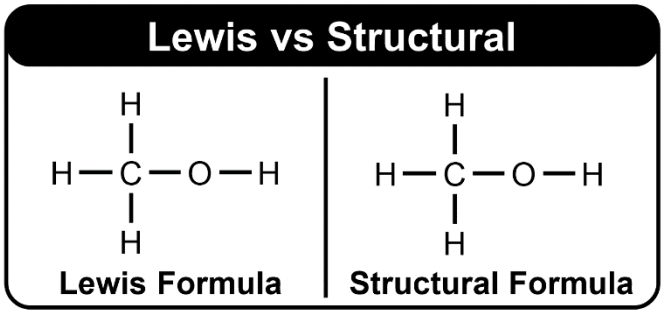
b) Molecular structure cannot be used to calculate molecular weight.

c) Molecular formula is sufficient to show the composition of a compound.

d) Molecular structure shows how atoms are connected to each other.

Structural Formula: shows how atoms in a compound are _____ to one another.

- □ Same as _____ structure except we do not show lone pairs.



EXAMPLE: Draw a structural formula for C_2H_6.

CONCEPT: STRUCTURAL FORMULA

PRACTICE: Propane (C_3H_8) is a component of liquified petroleum gas. Draw a structural formula for propane. (Hint: Carbon makes four bonds.)

PRACTICE: Methylamine (CH_5N) is a gaseous compound with a fishy smell. Draw this molecule using structural formula.