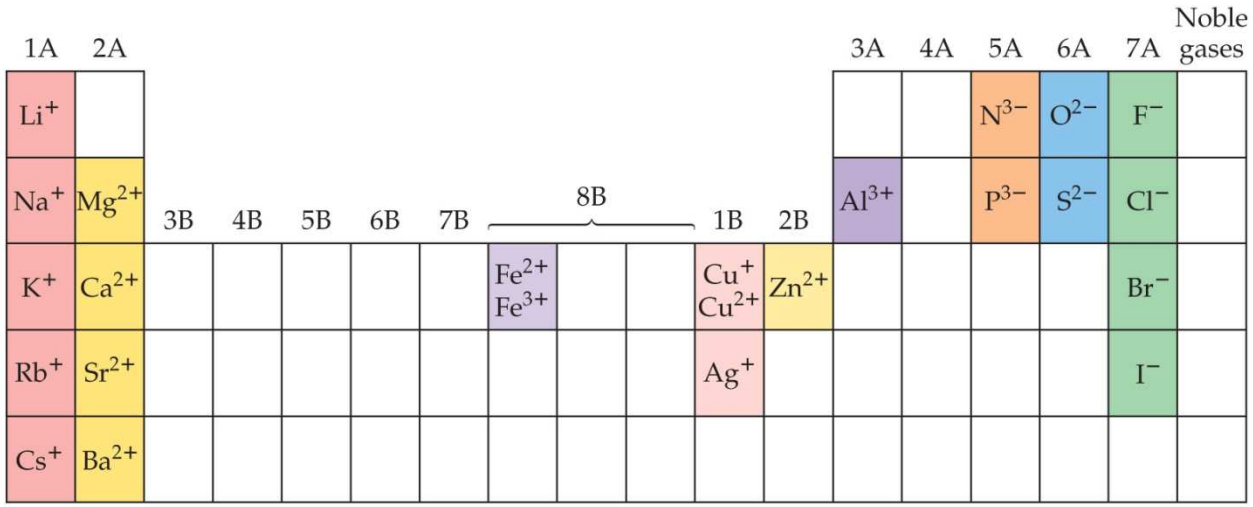
Chapter 4
Chemical Bonds: The Ties That Bind

The correct formula for the ionic compound formed from the elements potassium and oxygen would be:



a. KO
b. K_2O
c. KO_2
d. K_2O_3
e. K_3O_2

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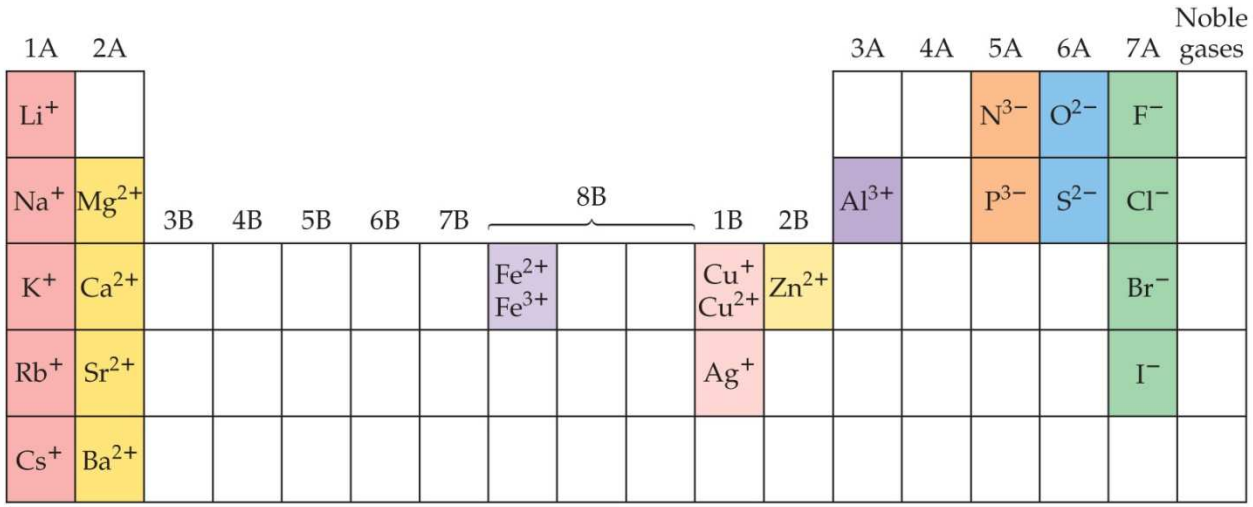

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What is the correct name for this compound?

CuCl

Name?

a. Copper chloride
b. Copper(I)chloride
c. Copper(II)chloride
d. Copper monochloride
e. Cupric chloride

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CuCl

also may

be called

cuprous chloride

using older nomenclature.

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Which of the following would be the correct electron-dot (*Lewis*) symbol for nitrogen gas, N_2?

Table 4.1 Lewis Symbols for Selected Main Group Elements

Group 1A	Group 2A	Group 3A	Group 4A	Group 5A	Group 6A	Group 7A	Noble Gases
H·							He:
Li·	·Be·	·B·	·C·	:N·	:O·	:F·	:Ne:
Na·	·Mg·	·Al·	·Si·	:P·	:S·	:Cl·	:Ar:
K·	·Ca·				:Se·	:Br·	:Kr:
Rb·	·Sr·				:Te·	:I·	:Xe:
Cs·	·Ba·						

a. :N::N:

b. :N:N:

c. N:::N

d. N:N

e. :N:::N:

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a. :N::N:

b. :N:N:

c. N:::N

d. N:N

e. :N:::N:

Carbon monoxide, CO, is a colorless, odorless, toxic gas. Which of the following best describes this molecule?

a. Ionic bonding
b. Polar covalent bonding, with the carbon end being more negative than the oxygen end
c. Polar covalent bonding, with the oxygen end being more negative than the carbon end
d. Nonpolar covalent bonding

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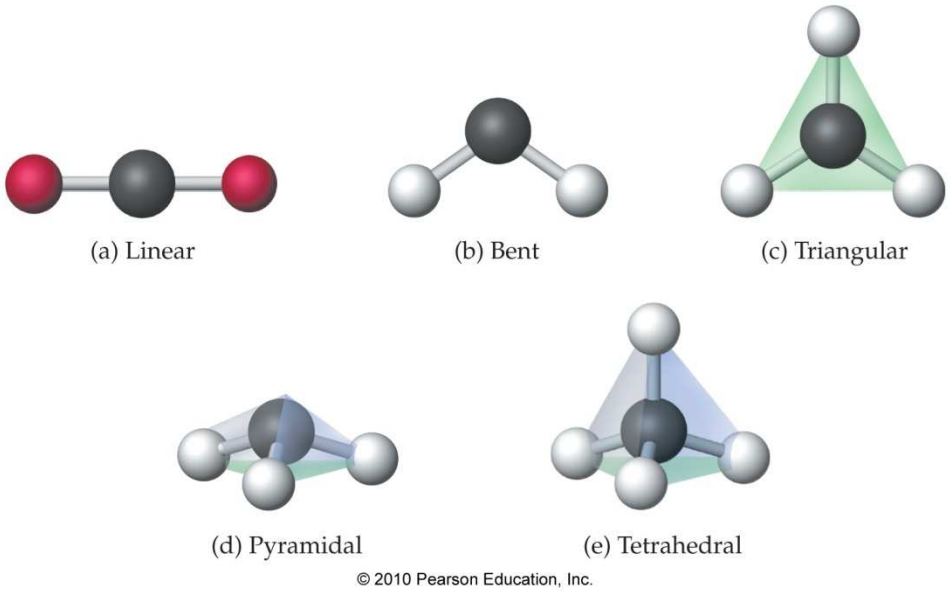

a. Linear
b. Triangular planar
c. Trigonal pyramidal
d. Tetrahedral
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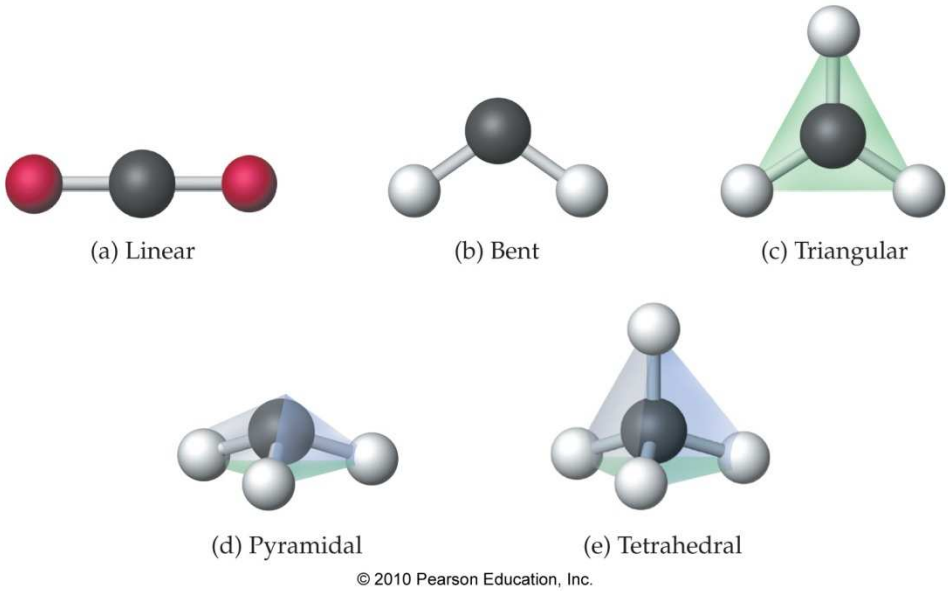

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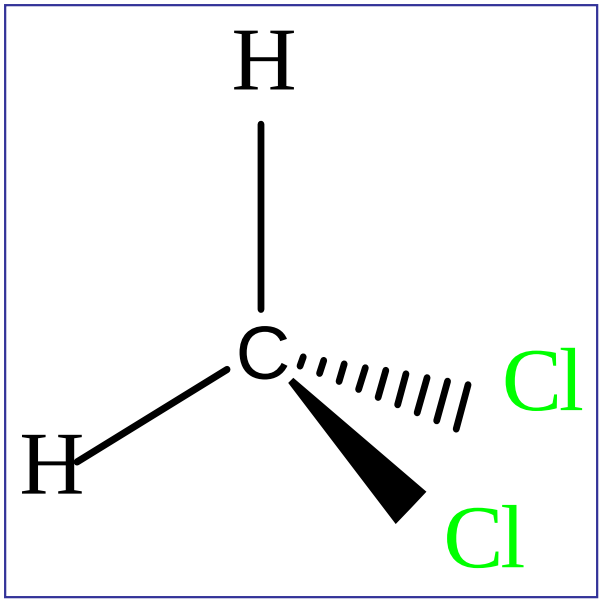

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b. Both bonds and molecule are nonpolar.
c. Nonpolar bonds, polar molecule
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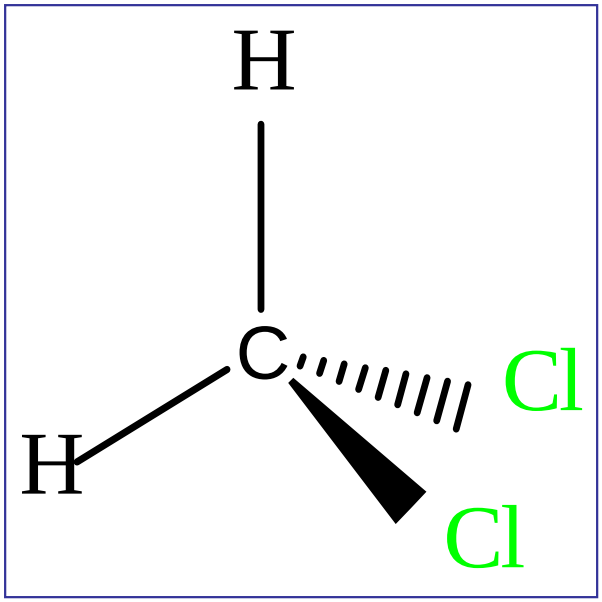

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