

In your groups, read through and come to a consensus choice for what you feel is the correct answer for the following questions.

1. Which of the following would be properly classified as a set of covalent molecules?

- A) CO₂, NH₄Cl, C₂H₆ B) CO₂, HCN, O₂ C) NaClO₄, C₄H₁₀, NH₃
 D) NaCl, CH₄, S₈ E) AgCl, ScF₃, P₄

2. Which of the following represent the Lewis structure for N?

- A) $\cdot\ddot{N}:$ B) $N\cdot$ C) $:\ddot{N}:$ D) $\cdot\ddot{N}:$ E) $\ddot{N}:$

3) Draw the Lewis structure for S²⁻?

4) Identify the compound with the highest magnitude of lattice energy. Explain the reasoning behind your choice below:

- A) LiCl B) NaCl C) CsCl D) KCl
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5) Place the following elements in order of **increasing** electronegativity. K Cs P

- A) P < Cs < K B) P < K < Cs C) K < P < Cs D) Cs < K < P
 E) Cs < P < K

6) Choose the bond below that is **most** polar. Explain the reasoning behind your choice below:

- A) C-C B) C-F C) F-F D) C-N E) C-O
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7) Place the following in order of **decreasing** bond length. H-F H-I H-Br

- A) H-I > H-Br > H-F B) H-Br > H-F > H-I C) H-I > H-F > H-Br
 D) H-F > H-I > H-Br E) H-F > H-Br > H-I

Explain the reasoning behind your choice below:

8) Identify the shortest bond.

- A) double covalent bond B) triple covalent bond C) single covalent bond
D) all of the above bonds are the same length

Explain the reasoning behind your choice below:

Draw the Lewis structures for the following molecules: Try using the NAS rule I went over in class.

CH ₂ I ₂	N ₂ F ₄
CH ₂ S	O ₃
CO ₃ ²⁻	BrF ₃

9) Which compound has the longest carbon-carbon bond length?

- A) C₂H₂ B) C₂H₄ C) C₂H₆ D) all bond lengths are the same