

1. (0.3 pt) Indicate the number of p^+ , e^- , and valence e^- for the following Then draw Lewis structures and write “stable” or “not stable” after the structure as would be predicted by the Lewis Octet Rule.#

p^+ $\# e^-$ $\#$ valence e^- Lewis Structure Stable???

a) Ca^+

b) S^{2-}

2. (0.3 pt) Indicate the total valence e^- number and draw Lewis structures for the following molecules or compound ions. For the examples that are larger than diatomic, the central atom in each structure is underlined.

a) C S_2

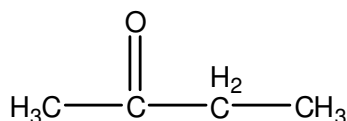
b) Si H_2Cl_2

c) N H_2^-

valence
 e^- #

Lewis
Structure

d) (0.1 pt) What is the orbital hybridization of the second carbon atom from the left in the structure below?



3. Write an electronic configuration (0.1pt) and fill in an energy level diagram (0.2 pt) for an As (arsenic) atom. (If you want to save paper, you can write your answer for the energy level diagram on the back of the page.)