

Recitation Week 1

1/16/13

Problems. You may work on these individually or in groups, and then I will go over them.

1. How many valence electrons do the following elements have?

(a) Li (b) C (c) F (d) Al (e) N

2. Draw Lewis structures for the following molecules:

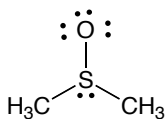
(a) CO₂ (b) N₂ (c) Cl₂

(d) HNO₃ (e) NH₃ (f) CH₃F

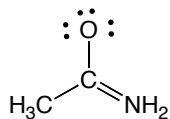
(g) H₂SO₃ (h) C₂H₄ (i) N₂H₄

3. Label all the atoms (besides H) in these molecules with their **formal charge**:

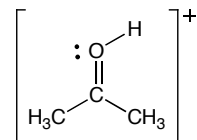
(a)



(b)

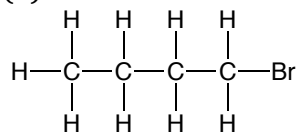


(c)

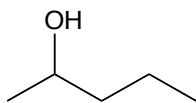


4. Write condensed structures for the following molecules:

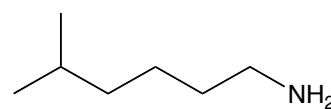
(a)



(b)



(c)



5. Convert these condensed formulas to (a) dash and (b) bond-line structures.

(a) CH₃CH(OH)CH₃

(b) (CH₃)₃COH

(c) CH₃CHO