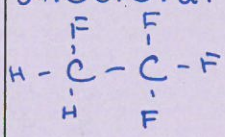
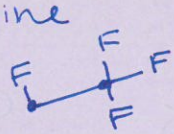
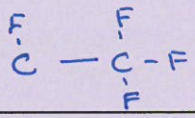
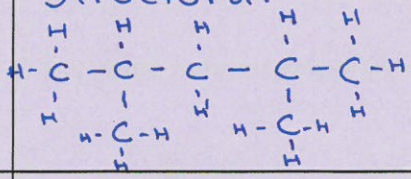
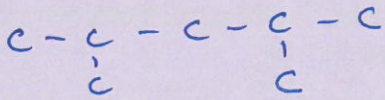
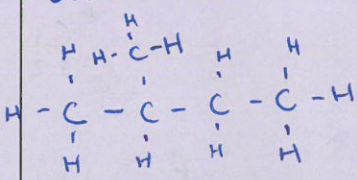
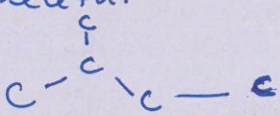
Name KEY Period ___

Chap 1 Quiz Review: Organic Chemistry

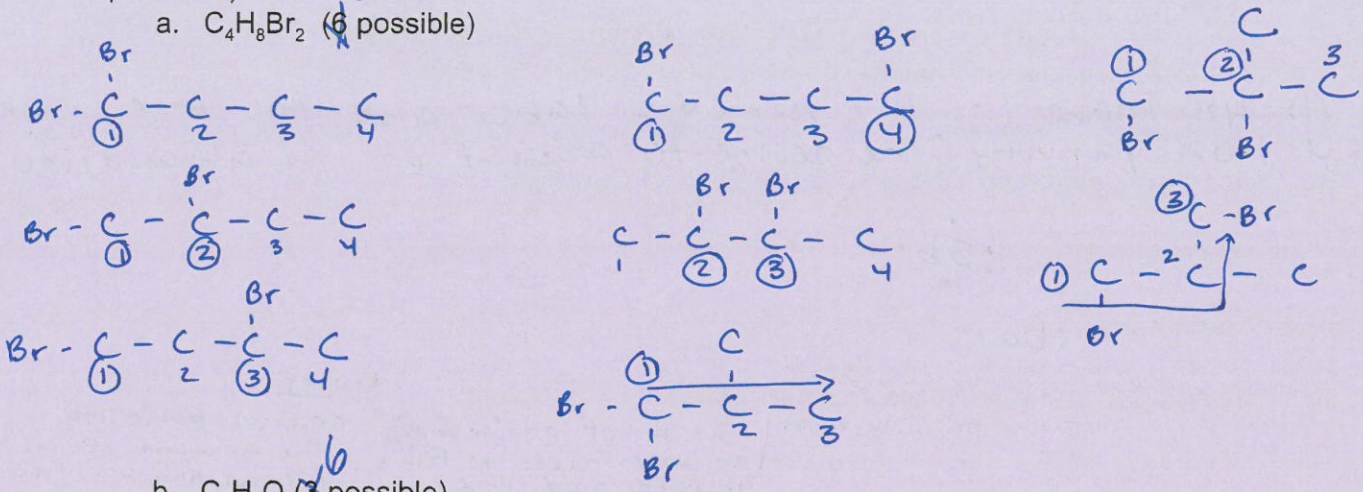
1. Describe the trend of electronegativity on the periodic table (1 Question).
   As you move up the periodic table and to the right, electronegativity (the desire to attract e⁻ in a bond) increases.
2. Be able to draw electron dot diagrams for elements (1 Question).
   a. Anitmony (Sb) :Sb·
   b. Barium (Ba) ·Ba·
3. Compare and Contrast valence electrons and valence (1 Question)

The # of outermost e⁻	The # of e⁻ (or bonds) an atom needs to fill its outermost shell	Both control bonding (The amount of bonds formed and type [ionic or covalent])

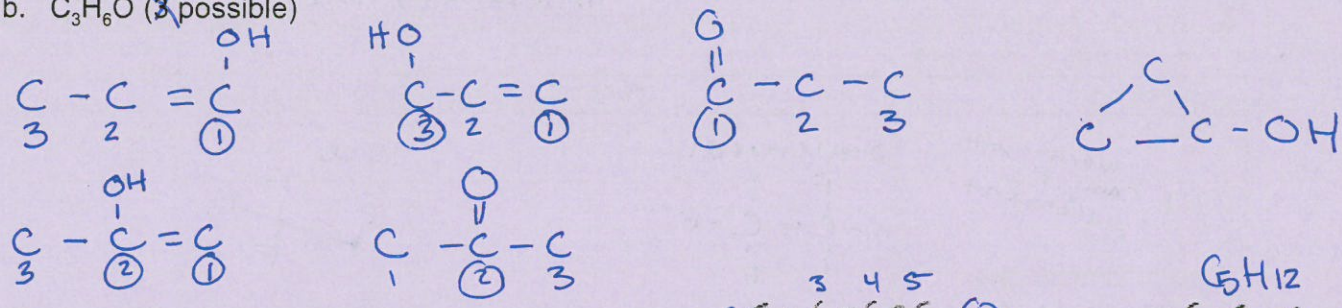
4. Be able to identify the type of given formula and work the compound through all formula types (3 multi-step questions).

Compound	Other Formulas (Make sure to label)	
$C_2H_2F_4$ - works with any F placement. Type of formula given: molecular	Structural  Abbreviated CH_2FCF_3	line  skeletal 
$(CH_3)_2CHCH_2CH(CH_3)_2$ Type of formula given: abbreviated	molecular C_7H_{16} structural 	line  skeletal 
 Type of formula given: line	molecular C_5H_{12} structural 	abbreviated $(CH_3)_2CHCH_2CH_3$ or $CH_3CH(CH_3)CH_2CH_3$ skeletal 

5. Be able to draw all the isomers for the following using a **skeletal** formula (3 Questions: multi-step problems).
   a. $C_4H_8Br_2$ (~~6~~ 8 possible)

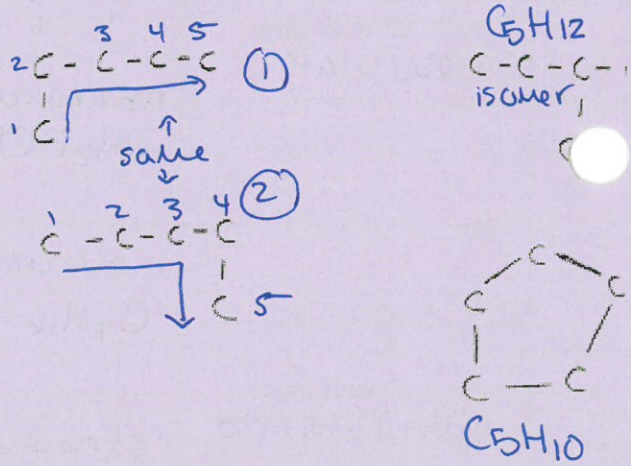


   b. C_3H_6O (~~3~~ 6 possible)



6. Be able to recognize molecules as the same vs isomers (1 Question).
   a. Which of the molecules to the right are the same?
   b. How do you know?

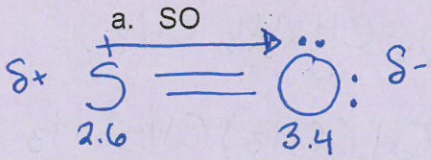
1 & 2 are the same. Both are 5 carbon atoms long and have 12 hydrogen.



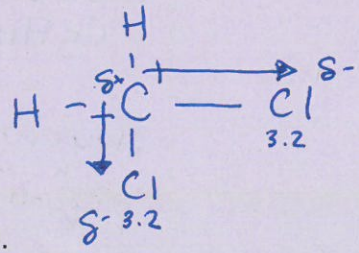
7. Be able to draw structural formulas and indicate any bond polarity (not C – H) with ⟶ (2 Questions).

Electronegativity Values: H = 2.2 O = 3.4 S = 2.6 Cl = 3.2

a. SO



b. CH_2Cl_2



8. Ionic vs Covalent Bonds (4 Questions)
   a. Be able to identify bonds as ionic (I) or covalent (C).
      1. SH_2 C
      2. KF I
   b. Compare and Contrast Ionic vs Covalent bonds.

		BOTH
• transferring e⁻ • metal + nonmetal • very different electronegativities.	• sharing e⁻ • 2 nonmetals • identical/similar electronegativity	Fill valence shells JOIN elements to form compounds