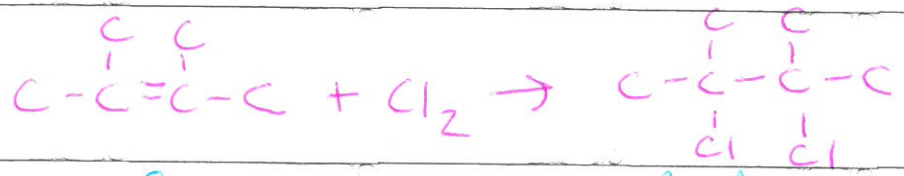
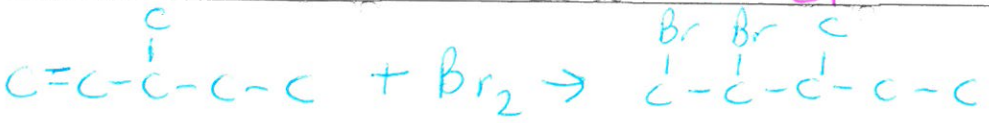
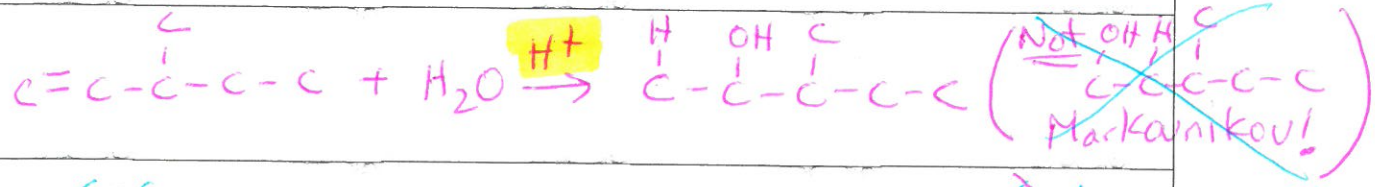
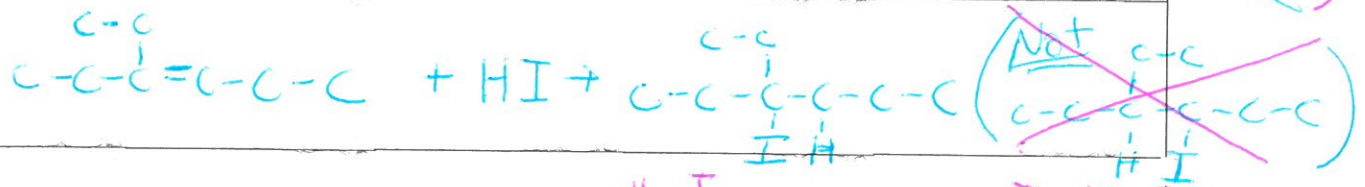
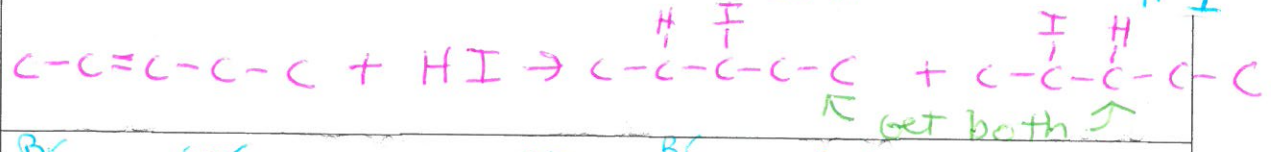
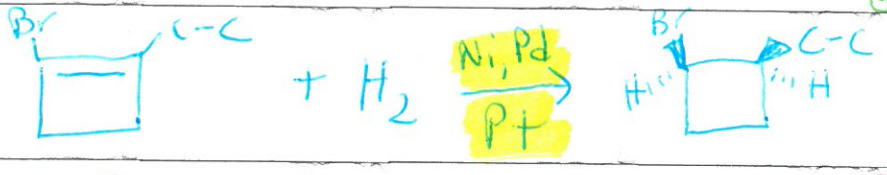
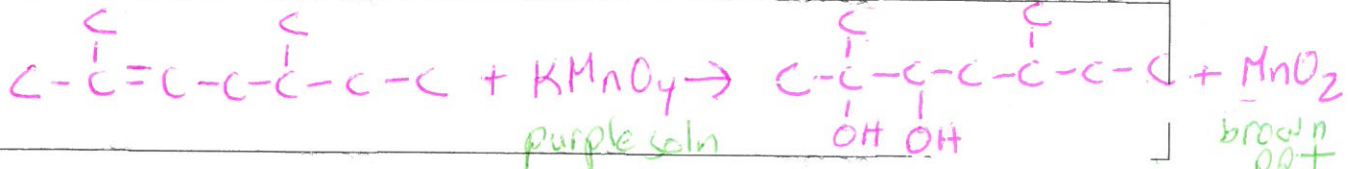
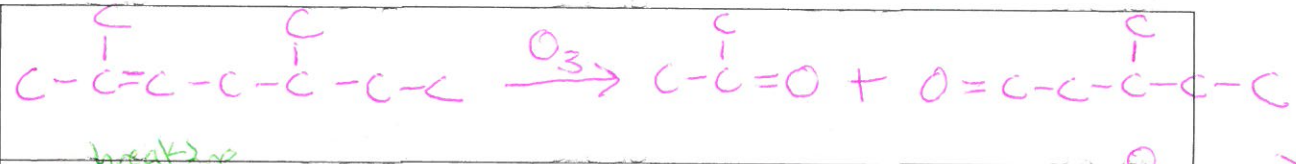
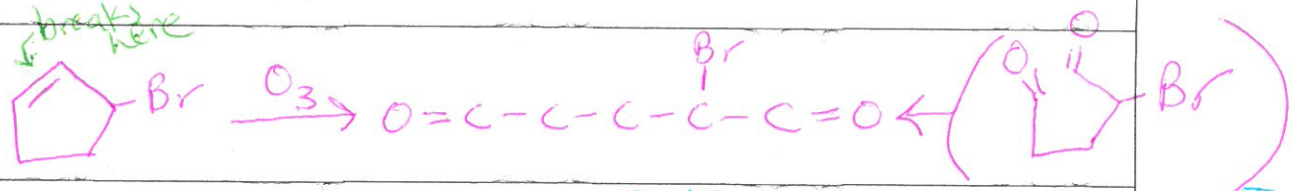
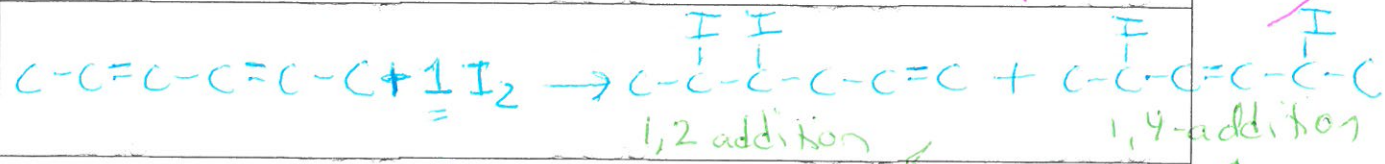
WS: Alkene Reaction Practice

Name Key Period ___

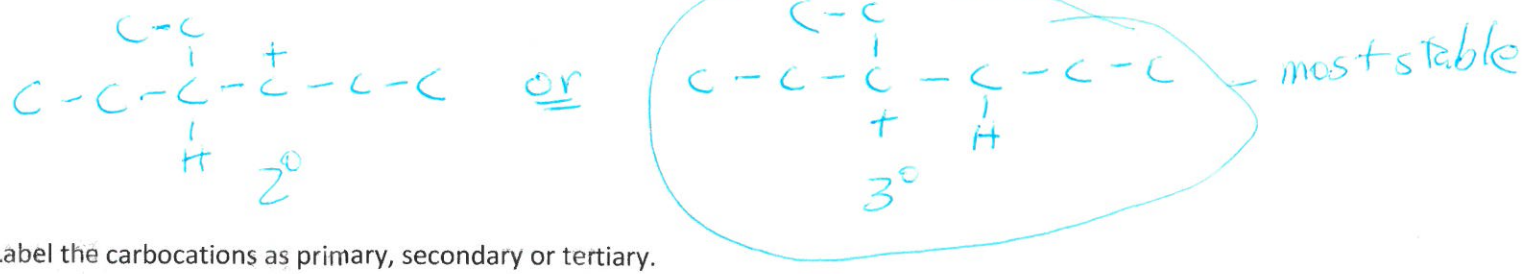
Complete the following table by writing reactions with the given reactants.

- Include reactants, products and, if applicable, catalysts.
- If appropriate, show whether the *cis* or *trans* form of the product is produced.

	Reactant 1	Reactant 2	Equation using the 2 given reactants
1.	2,3-dimethyl 2-butene	Chlorine	
2.	3-methyl-1-pentene	Bromine	
3.	3-methyl-1-pentene	Water	
4.	3-ethyl-3-hexene	HI	
5.	2-pentene	HI	
6.	1-bromo-2-ethyl-cyclobutane	Hydrogen	
7.	2,5-dimethyl-2-heptene	KMnO4	

8.	2,5-dimethyl-2-heptene	Ozone	
9.	3-bromo-cyclopentane	Ozone	
10.	2,4-hexadiene	Iodine – 1 mole	
11.	2,4-hexadiene	Iodine – 2 moles	

12. Using Reaction #4 above with 3-ethyl-3-hexene and HI:
    a. Draw the **two <u>carbocations</u>** that **potentially** could be formed as an intermediary.



    b. Label the carbocations as primary, secondary or tertiary.
    c. Circle the carbocation that is most stable.
    d. Explain why the one circled is the most stable.

3° cation more stable than 2°
or follows Markovnikov's Rule

13. Draw the other carbocation that resonates with $CH_3CHBrCHCH{=}CH_2$