IB ChemII/Adv. Chem: Alkene Reactions wkst #1 Name:

Draw structural formulas for the following: NEATNESS will be heavily considered when I grade these.

1. cis-2-Heptene

2. trans-3,4-Dichlorocyclopentene

3. 1,3-Cyclohexadiene

4. (Z)-1-Bromopropene

5. (S)-3-Hydroxy-1-pentene

6. 3,3-Dimethyl-1-butyne

Given: For questions 7 – 13 you are given **3-methyl-1-Butene** as the organic reactant.

7. Draw/name the product from a hydrogenation reaction

8. Draw/name the product from the reaction with hydrogen iodide

9. Draw/name the product from the reaction with chlorine gas using cyclohexane as the solvent

10. Draw/name the product from the reaction with chlorine gas using water as the solvent.

11. Draw the intermediate structure for # 8

12. Draw the intermediate structure for # 9

13. What is the general name of the intermediate formed in # 9?

14. Draw out the mechanism from the reaction identified in question #8

15. What kind of addition will this be (anti or syn) and why?

16. Draw out the mechanism for the reaction of 3-Methylcyclopentene with bromine (Br_2) using CCl_4 as the solvent.