EXERCISE #8b: Diels Alder Cycloadditions with Dienes

Organic Chem II Alfred State College

**Predict and draw the products of a 1,3 cyclo addition of the reagents below.**

**Build a few of the products to see the 3-dimensional character of the adducts.**











**EXERCISE 8a: Carbocation and bridgehead additions with Dienes**

**Organic Chem II Alfred State College**



2-methyl-1,3-pentadiene

**1)Predict all the likely carbocations that can form when HCl ( peroxide free acetic acid) is added to the above compound**



primary

carbocations

rearrangements

kinetically

not likely

**2)Draw all the corresponding monosubstituted chlorides that can form and circle the ones that are most immediately likely (kinetic result)**



 Thermodynamically mostg stable

**3)Which ones above are the most stable assuming Saitsev’s rule (thermodynamic result)**

 **(in box)**

**4) Predict all the likely dibromo compounds formed from the above compound assuming Br2 in CCl4 (dry) is added**



Primary

same