HOMEWORK ASSIGNMENT #5 ORGANIC CHEMISTRY II

Reaction predictions for dienes ; allyls and basic aromaticity ideas

Due Friday 14 March

**Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_/25**

**6.1a Predict all the likely products of radical allylic substitution of Br\* on:**



2 pts

**6.1b Circle product(s) above arising from symmetric radical intermediates.**

2 pts

**6.2a What are the possible products of the base-driven alkenyl hydrolysis**



2 pts

 1 pt

**6.2b Which of the products is most thermodynamically stable ?**

**6.3 what does this make ?**



2 pts

2 pts



**\_\_\_/11**

**6.4. Predict all the likely possible products of the addition of HBr below**



5 pts

2 pts

**Circle the most likely kinetic product (assuming carbocation mechanism)**

**6.5. Aromatic basics**

**Name the three criteria necessary for the property of aromaticity to exist in a molecule: (3 pts)**

**1)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Decide which of the molecules below are aromatic: (4 pts total)**

1. **1,3-butadiene YES NO**
2. **1,3-cylcobutadiene YES NO**



1. **YES NO**



1. **YES NO**

**\_\_\_/14**