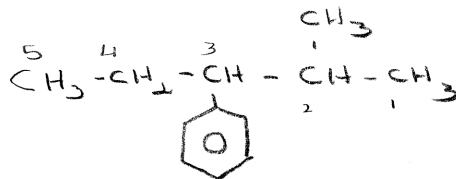


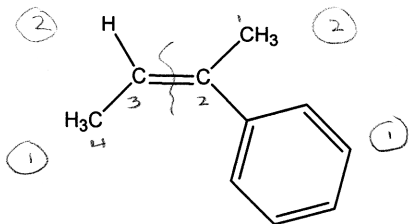
## Chapter 16: Arenes Worksheet

### Nomenclature:

1. Draw 2-methyl-3-phenyl pentane

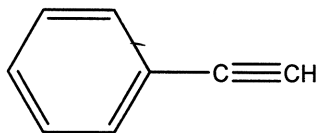


2. Name the following:



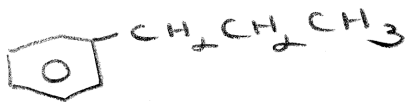
(Z) - 2 - phenyl - 2 - butene

3. Name the following:



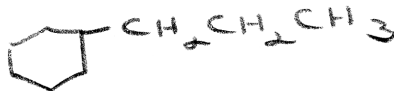
phenylacetylene or phenylethyne

4. Draw *n*-propylbenzene:



### Reactions:

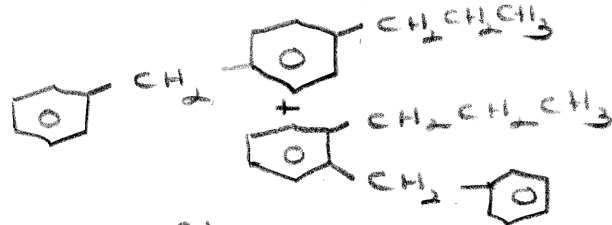
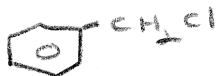
1. *n*-propylbenzene +  $\text{H}_2/\text{Ni}$ ,  $200^\circ\text{C}$ , 100 atm.  $\rightarrow$



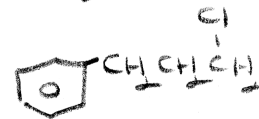
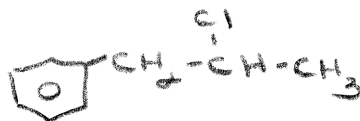
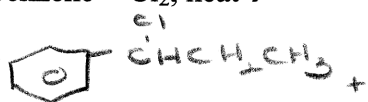
2. *n*-propylbenzene + chlorobenzene  $\rightarrow$

N. R.

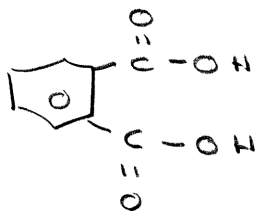
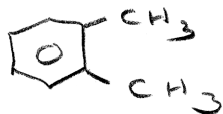
3. *n*-propylbenzene + benzyl chloride  $\rightarrow$



4. *n*-propylbenzene +  $\text{Cl}_2$ , heat  $\rightarrow$



5. *o*-xylene +  $\text{KMnO}_4$ , heat  $\rightarrow$

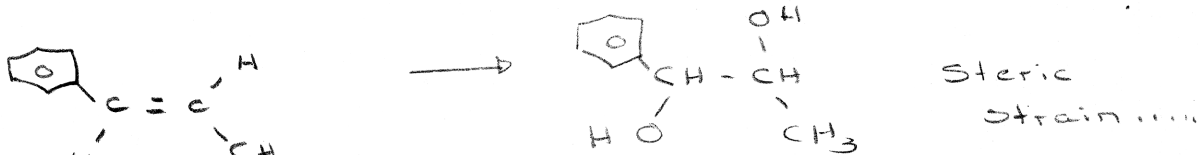


6. React trans-1-phenyl-1-propene with the following:

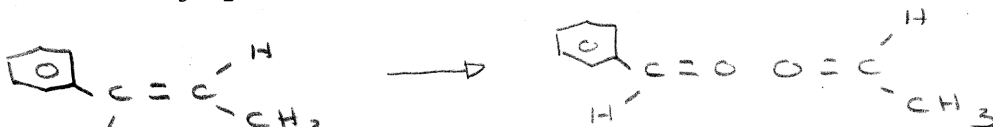
a. HBr + Peroxides



b.  $\text{KMnO}_4$



c.  $\text{O}_3/\text{H}_2\text{O}/\text{Zn}$



d. Excess  $\text{Br}_2$ , Fe

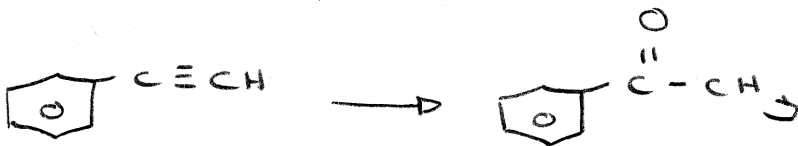


e.  $\text{Br}_2$ , heat



7. React phenylethyne with the following:

a.  $\text{H}_2\text{O}, \text{H}^+$



b. 2HBr

