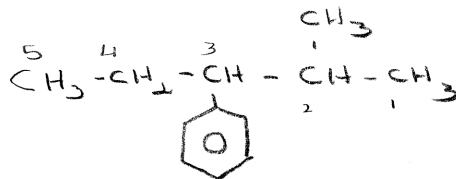


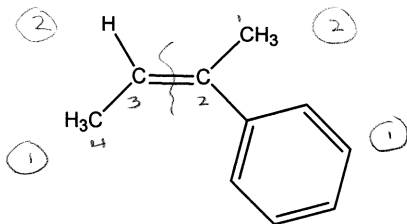
## Chapter 16: Arenes Worksheet

### Nomenclature:

1. Draw 2-methyl-3-phenyl pentane

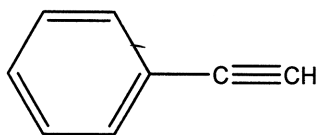


2. Name the following:



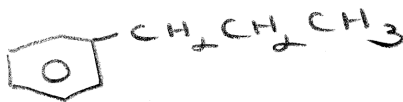
(Z)-2-phenyl-2-butene

3. Name the following:



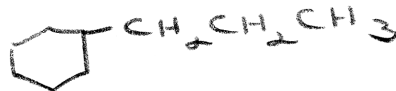
phenylacetylene or phenylethyne

4. Draw *n*-propylbenzene:



### Reactions:

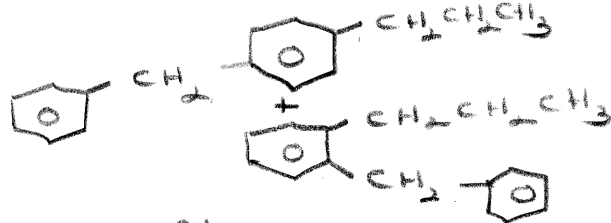
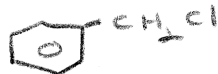
1. *n*-propylbenzene + H<sub>2</sub>/Ni, 200°C, 100 atm. →



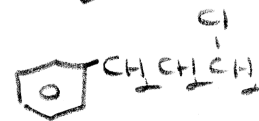
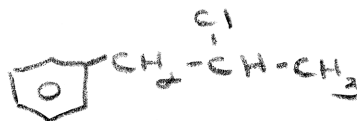
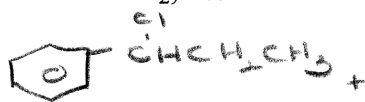
2. *n*-propylbenzene + chlorobenzene →

N.R.

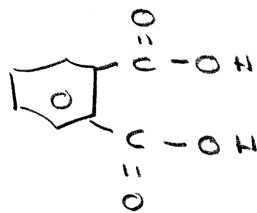
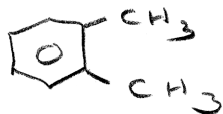
3. *n*-propylbenzene + benzyl chloride →



4. *n*-propylbenzene + Cl<sub>2</sub>, heat →



5. *o*-xylene + KMnO<sub>4</sub>, heat →

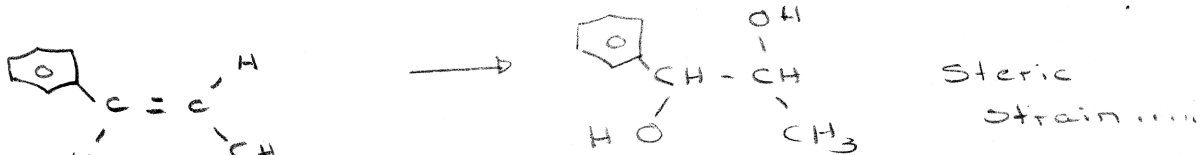


6. React trans-1-phenyl-1-propene with the following:

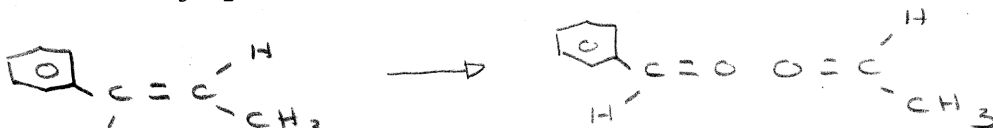
a. HBr + Peroxides



b.  $\text{KMnO}_4$



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



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

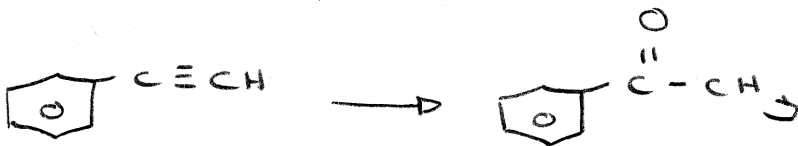


e.  $\text{Br}_2$ , heat



7. React phenylethyne with the following:

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



b. 2HBr

