Electrophilic Substitution

Pre-lesson assignment- textbook page 437-440 (scanned)

Define the following terms

- Substitution reaction
- Electrophile

Now watch the video on electrophilic substitution

Make notes on the reactivity of Benzene

Use the following questions as guidance

1. Write a mechanism for the electrophilic substitution of electrophile E^+ with benzene.
2. Benzene can be nitrated.
    a. State the reagents and conditions for nitration of benzene.
    b. Show how the electrophile NO_2^+ is produced from nitric acid.
    c. Show the mechanism for nitration
    d. Show how the sulfuric acid is re-formed.
3. Benzene can also be halogenated
    a. List some common halogen carriers.
    b. Show how Br^+can be formed from Br_2 and $FeBr_3$
    c. Show the mechanism for bromination of benzene
    d. Show how the $FeBr_3$ is regenerated.