**Benzene and Electrophilic Substitution Reactions**

What is so special about benzene?

Why is benzene susceptible to attack by electrophiles?

**What happens when benzene reacts with an electrophile?**

**Step 1** – electrophilic attack – formation of a special carbocation called an arenium ion

Because this step disrupts the aromaticity, it is the \_\_\_\_\_\_\_\_\_\_\_ of the reaction. The arenium ion has a higher energy than the starting material or the product.

What is special about an arenium ion?

**Step 2** – deprotonation – restoring aromaticity – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ step

