CONCEPT: EAS – POLYSUBSTITUTED BENZENE

When two or more substituents are already on benzene, there are multiple new factors we must take into account.

- 1. Steric Effects
 - Crowded sites will not be reactive towards subsequent EAS reactions

2. Synergistic Groups

• When multiple directing groups direct toward the same position, yields of that product will be high

3. Competitive Groups

• When multiple directing groups disagree on where to substitute, mixed products will result

☐ The strongest ______ will determine the **major product** of the reaction

<u>PRACTICE:</u> Predict the major products of the following EAS reaction.

$$\begin{array}{c|c} O & Br_2 \\ \hline & cat. \ FeBr_3 \end{array}$$

<u>PRACTICE:</u> Predict the major products of the following EAS reaction.