


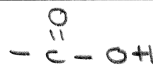



## Chapter 15: "Electrophilic Aromatic Substitution" (EAS) Worksheet

1. Complete the sentences:

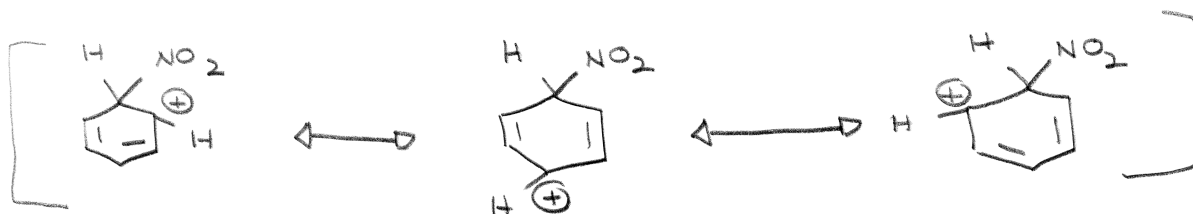
"It is not surprising that in its typical reactions the benzene rings serves as a source of electrons, that is, as a base.

"Just as the typical reactions of the alkenes are electrophilic addition reactions, so the typical reactions of the benzene ring are electrophilic substitution reactions.

1. Complete the Table:

Strongly Activating o,p Directors	Moderately Activating o,p Directors	Weakly Activating o,p Directors	Deactivating m Directors	Deactivating o,p Directors
-NH <sub>2</sub>	-OCH <sub>3</sub>		-NO <sub>2</sub>	F
-NHR	-OC <sub>2</sub> H <sub>5</sub>	-CH <sub>3</sub>	-N <sup>+</sup> (CH <sub>3</sub> ) <sub>3</sub>	Cl
-NR <sub>2</sub>	-OR	Alkyl Groups	-CH	Br
-OH				I
				
			-SO <sub>3</sub> H	
				
				

2. Draw all of the resonance structures for +C<sub>6</sub>H<sub>6</sub>NO<sub>2</sub>



Remember atoms don't  
move just electrons!!!!