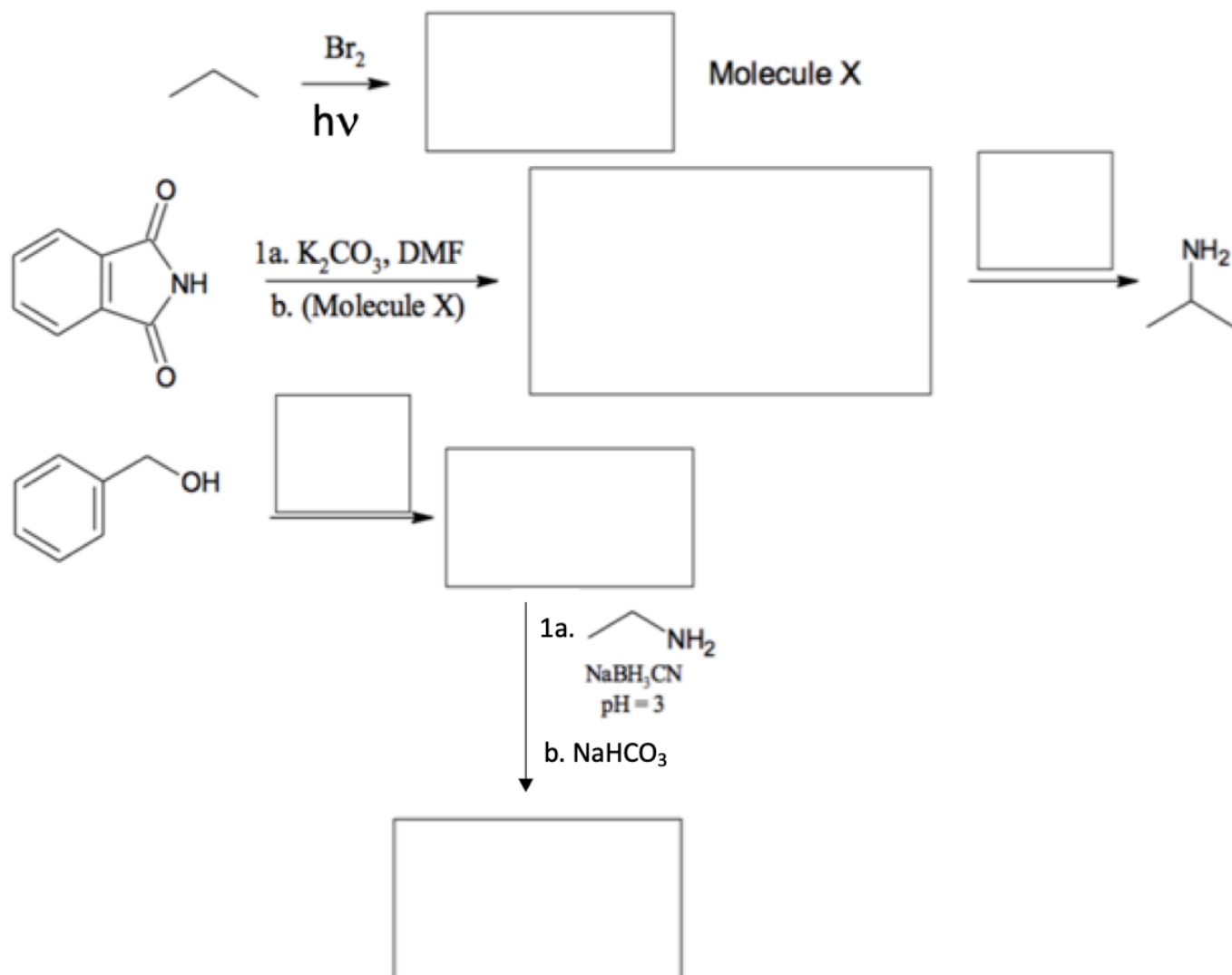
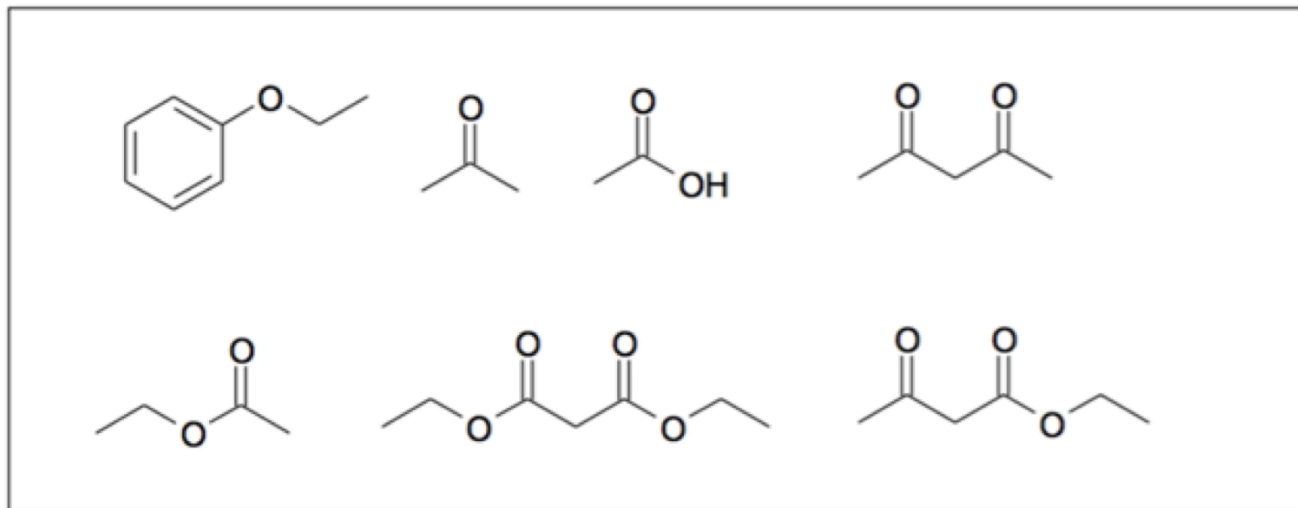


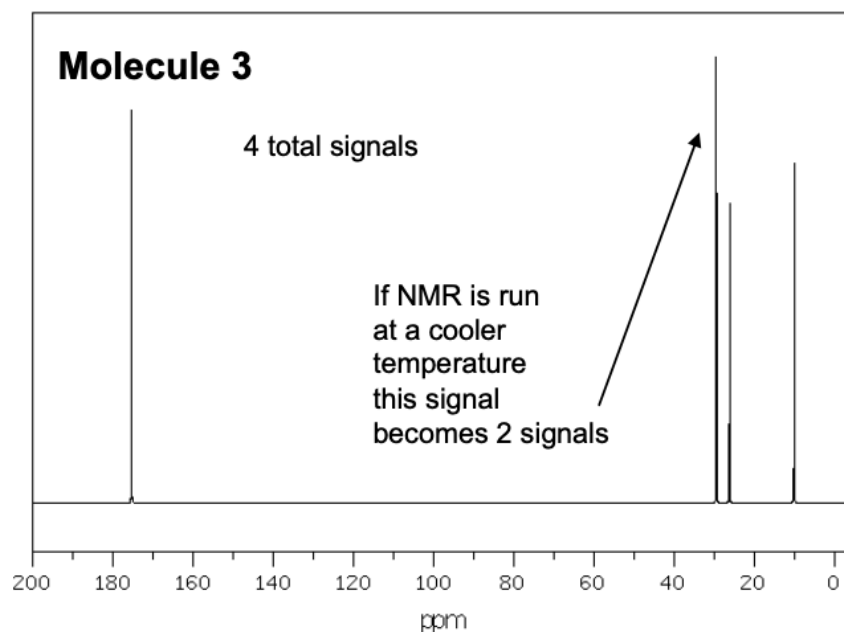
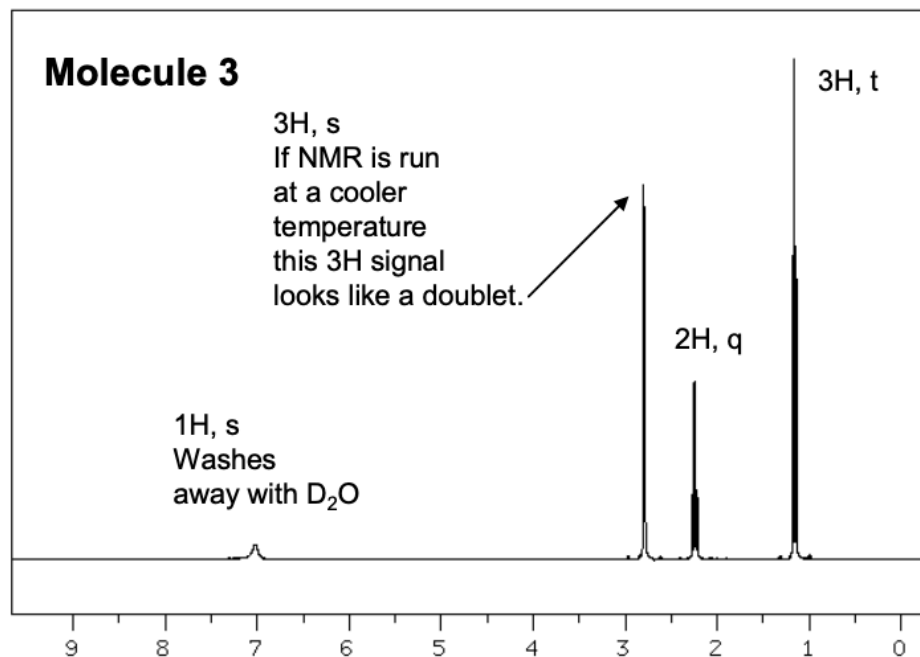
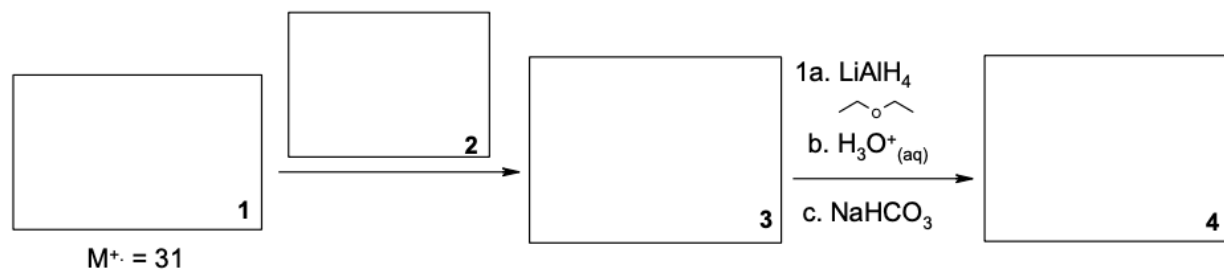
1. Fill in the missing major organic products and draw all curved arrow mechanisms...



2. Draw the conjugate base of each acid below. Then draw all resonance that stabilizes the conjugate bases. Finally rank the acids (not the conjugate bases) from lowest to highest pKa.



3. Draw the missing reactant, reagent and products below. To help you, the mass to charge ratio of the molecular ion (M^{+}) of molecule **1** is given, molecule **2** has a chlorine atom, product **3**'s ^1H - and ^{13}C -NMR spectra are given and product **4** has a pK_a of ~ 35 .



4. Do 3+ problems for the Chap. 21 Great Chap. Handout...

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxzaWVycmFvcmdhbmljY2hlbWlzdHJ5fGd4OjM0MGQzN2NjZWY2YzdjYjg>

5. Do 3+ problems for the Chap. 23 Great Chap. Handout...

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxzaWVycmFvcmdhbmljY2hlbWlzdHJ5fGd4OjZhMzNmZDRkZjRiZWVmMzI>