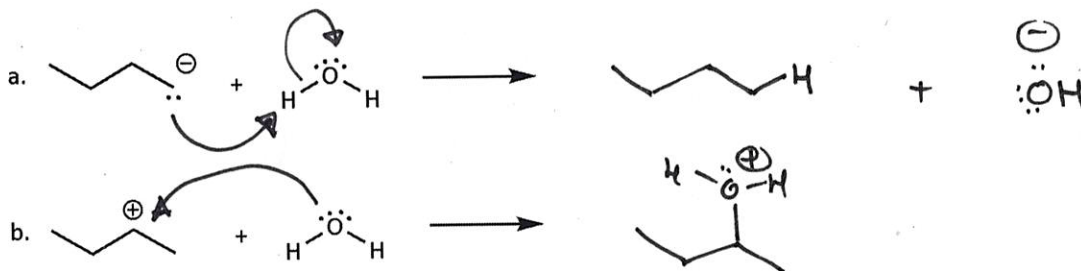


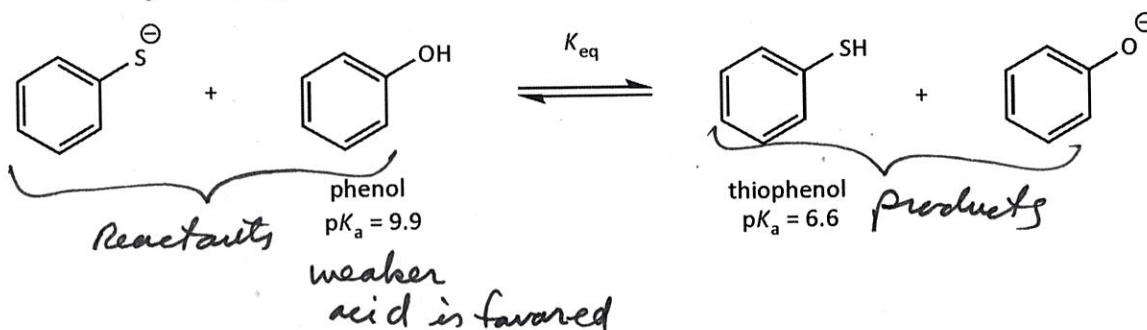
Quiz 3 (50 points)

Name Key

1. Show the expected products from the acid-base reactions shown below - use electron-pushing! (20 points)

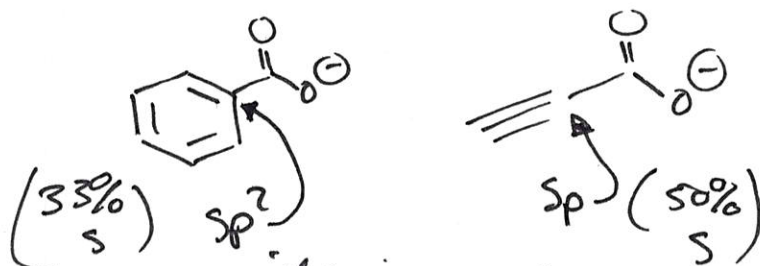
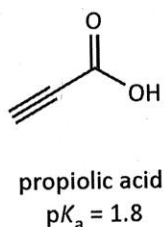
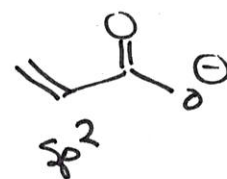
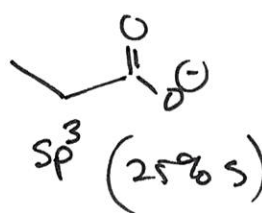
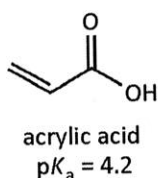
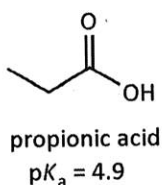


2. Predict the equilibrium constant (K_{eq}) for the acid-base reaction shown below. Which side is favored, Products or Reactants? (10 points)



$$K_{eq} = 10^{6.6 - 9.9} = 10^{-3.3} \quad (\text{which is } < 1)$$

3. For the series of carboxylic acids shown below, suggest an explanation for the trend in acidity. Consider what part of ARIO applies (or doesn't apply) in this case. (20 points)



the neighboring carbon has greater inductive effect w/ increase in s-character

$R-C(=O)O^-$ is the same for all four -