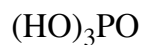
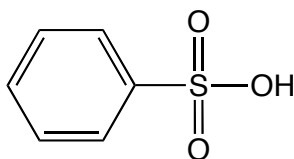


Problem Set 6

Question 1. Identify the conjugate bases for each of the following molecules. Then rank the conjugate bases from **most** to **least** stable. Do not refer to the text unless you get stuck. *Note: acidity is often correlated with the stability of the conjugate base, so your list should also match the acidities of the molecules, with analogies to some of the acids you saw in General Chemistry. For molecules with multiple "types" of hydrogen atoms, choose the most acidic hydrogen atom.*



cyclopentane

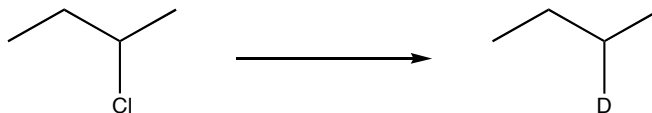


Question 2. Supply structures for the following compounds:

- a) Diisopropyl amine
- b) Butanol
- c) Cyclohexyl amine
- d) Methyl *tert*-butyl ether
- e) Glycerol
- f) Cyclopentyl bromide
- g) Vinyl fluoride

Question 3.

a) Identify what reagents are needed to transform 2-chlorobutane into 2-deuterobutane.



b) A student treats 3-chloro-1-butene with the same reagents used for part (a). This time, a mixture of products results. Why does this happen? What does this tell you about the nature of the species that you are using?

