1. (6 Points) Give the correct names for each of the following compounds.

2. (6 Points) provide the structure for the following common names.
a) Methylene chloride
b) isobutyl alcohol
c) tert-Butyl chloride

3. (6 Points, 2 Pts. Each box) Complete the following $\mathbf{S}_{\mathbf{N}} \mathbf{1}$, or $\mathbf{S}_{\mathbf{N}} \mathbf{2}$ reactions by filling the boxes with the appropriate products. Show stereochemistry.



Retention Product
Inversion Product
b)

$\xrightarrow[\mathrm{S}_{\mathrm{N}} 2]{\mathrm{CH}_{3} \mathrm{SNa}}$

4. (2 Points) How many elimination products are possible for the following reaction.


