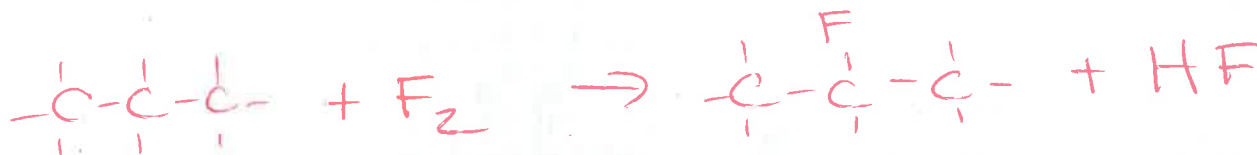


For each of the following questions, state the organic reaction type, draw structural diagrams for all reactants and products, and name all organic products. Do not balance the equations.

1. Propane reacts with fluorine.

Substitution



2-fluoropropane

~~2.~~ Chloroethane reacts with hydroxide ions.

3. Ethanol, present in gasohol, burns in an automobile engine.

Combustion



~~4.~~ 1-butanol reacts in the presence of concentrated sulfuric acid.

5. Dichloromethane is produced by reacting methane and chlorine.

Substitution



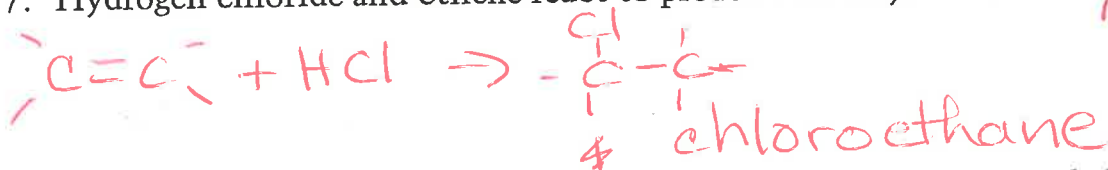
6. Bromine and ethene react to form an alkyl halide.

Halogenation (Addition)

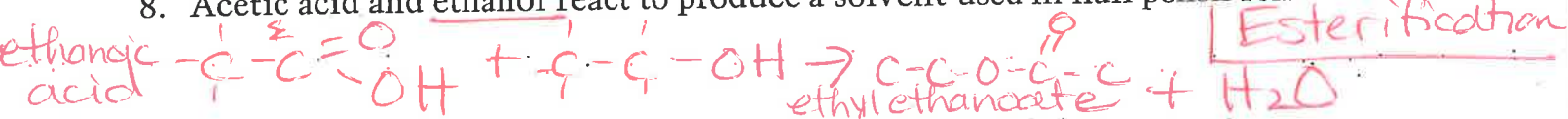


7. Hydrogen chloride and ethene react to produce an alkyl halide.

Hydrohalogenation (Addition)



8. Acetic acid and ethanol react to produce a solvent used in nail polish remover.



Esterification