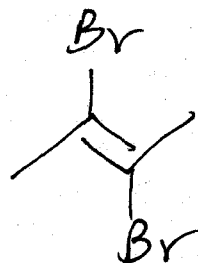
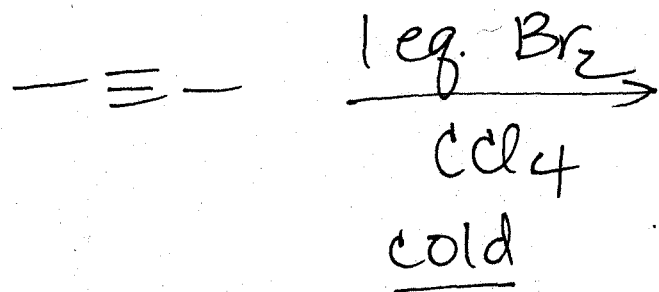
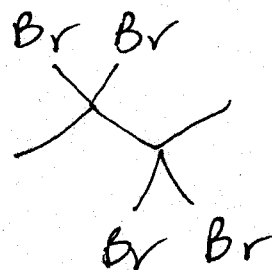
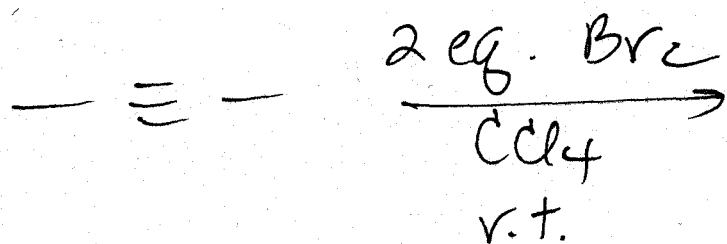


Addition Rxns to Alkynes

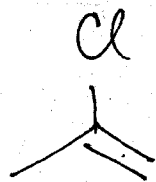
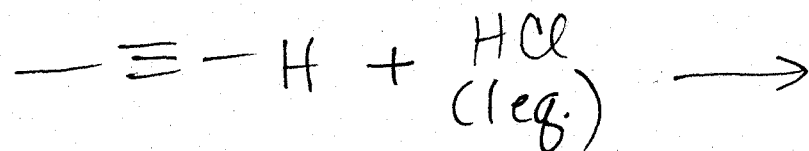
1. $\text{Br}_2 / \text{CCl}_4$ (or Cl_2)

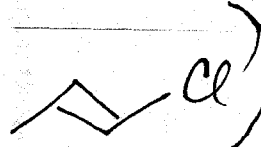


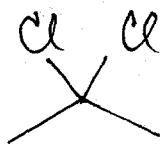
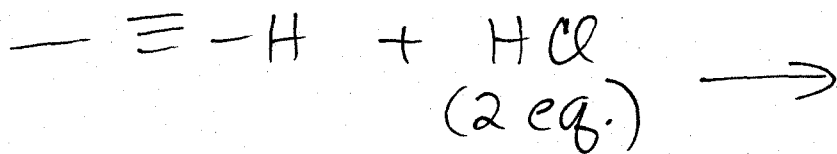
* can stop here b/c
e⁻ withdrawing
halogens
deactivate
the
alkene.



2. HX (Markovnikov)

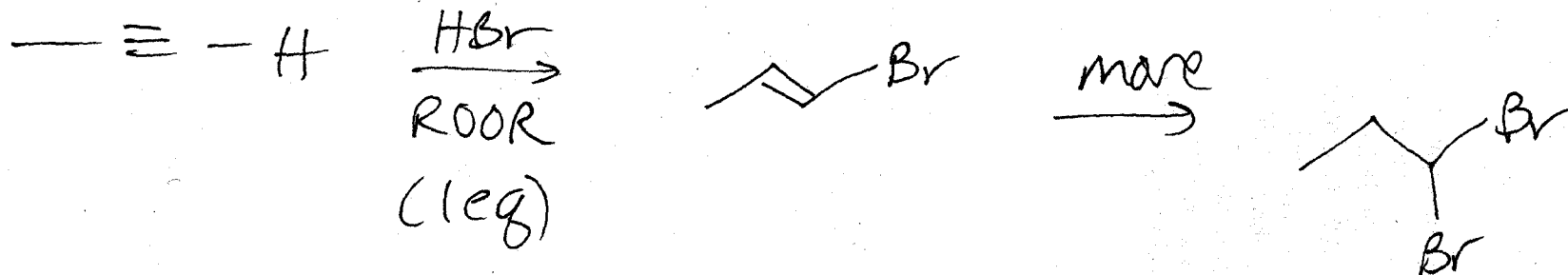


(not )

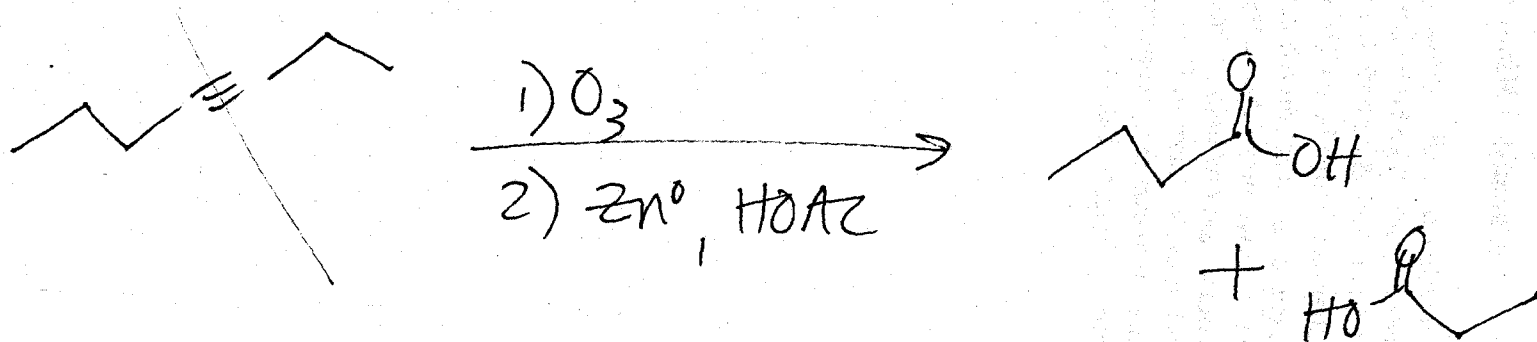


gem-dihalide

use HBr/ROOR - anti Markovnikov add'n



3. Oxidative cleavage - O_3 or KMnO_4
both give carboxylic acids.



Synthesis

