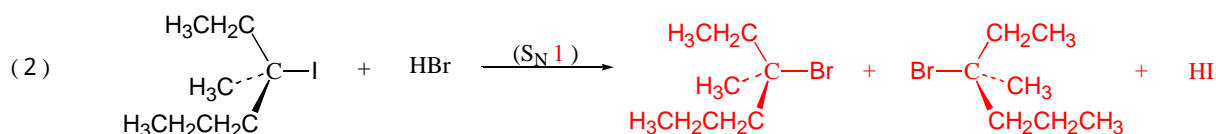
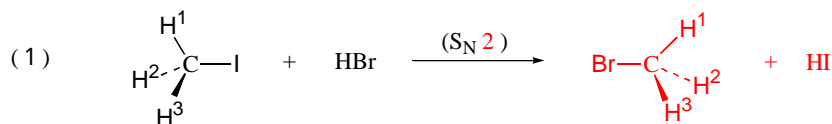
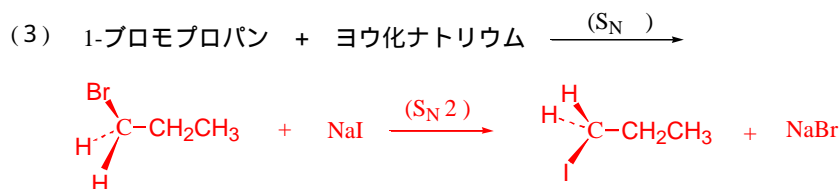
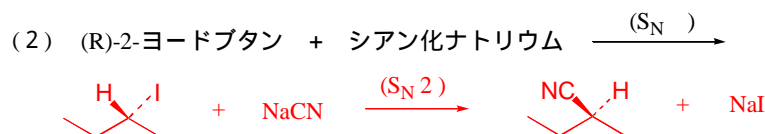
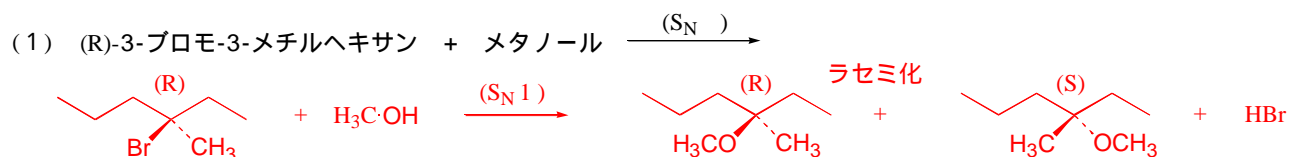


～ 求核置換反応 (S_N1・S_N2) ～

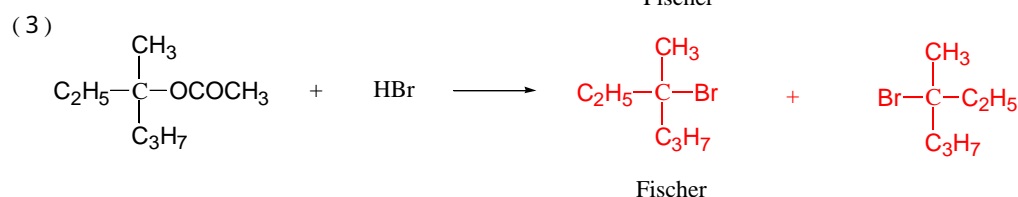
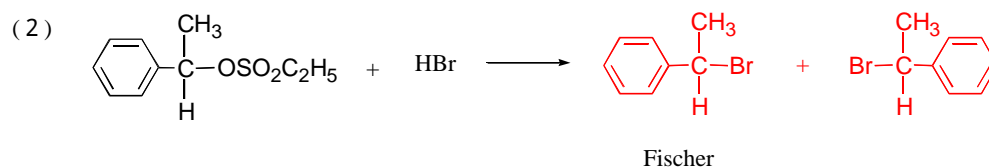
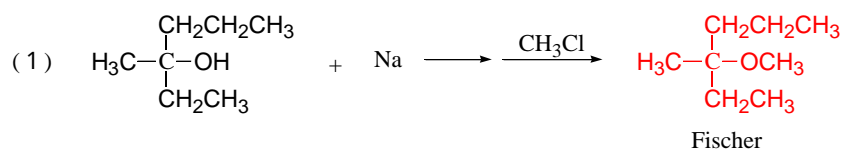
問題1. 次の各反応の生成物を立体構造がわかるように書け。また、反応機構を答えよ。



問題2. 次の各反応を、反応物及び生成物に関して立体構造がわかるように書け。また、反応機構を答えよ。

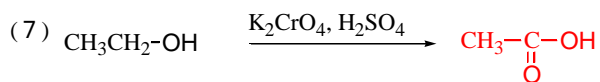
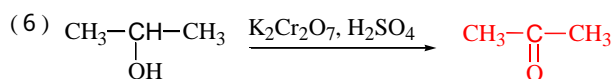
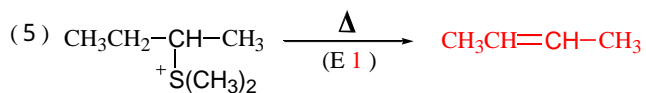
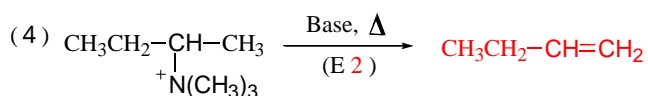
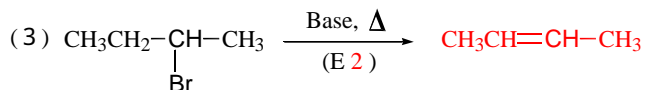
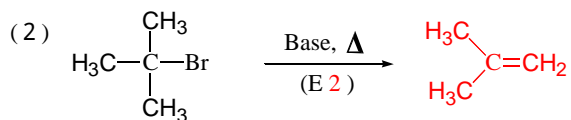
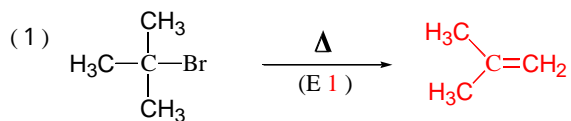


問題3. 次の各反応の主生成物を記せ。尚、反応物の構造はFischer投影式となっている。

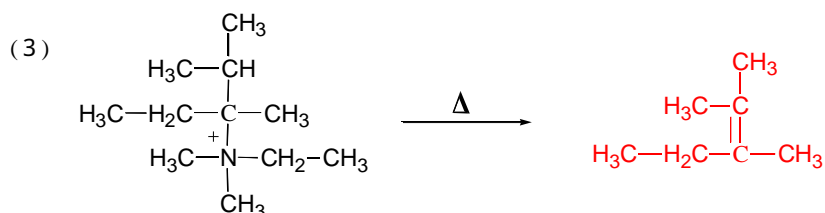
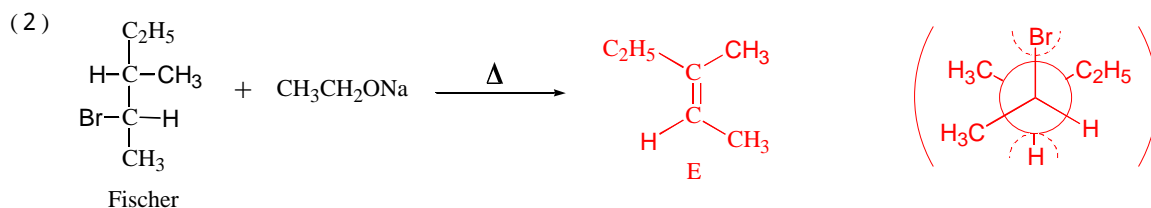
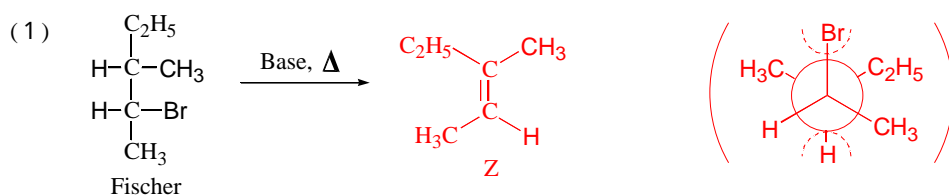


～脱離反応 (E1・E2)～

問題1. 次の各反応の主生成物を記せ。また、(1)～(5)については反応機構を答えよ。

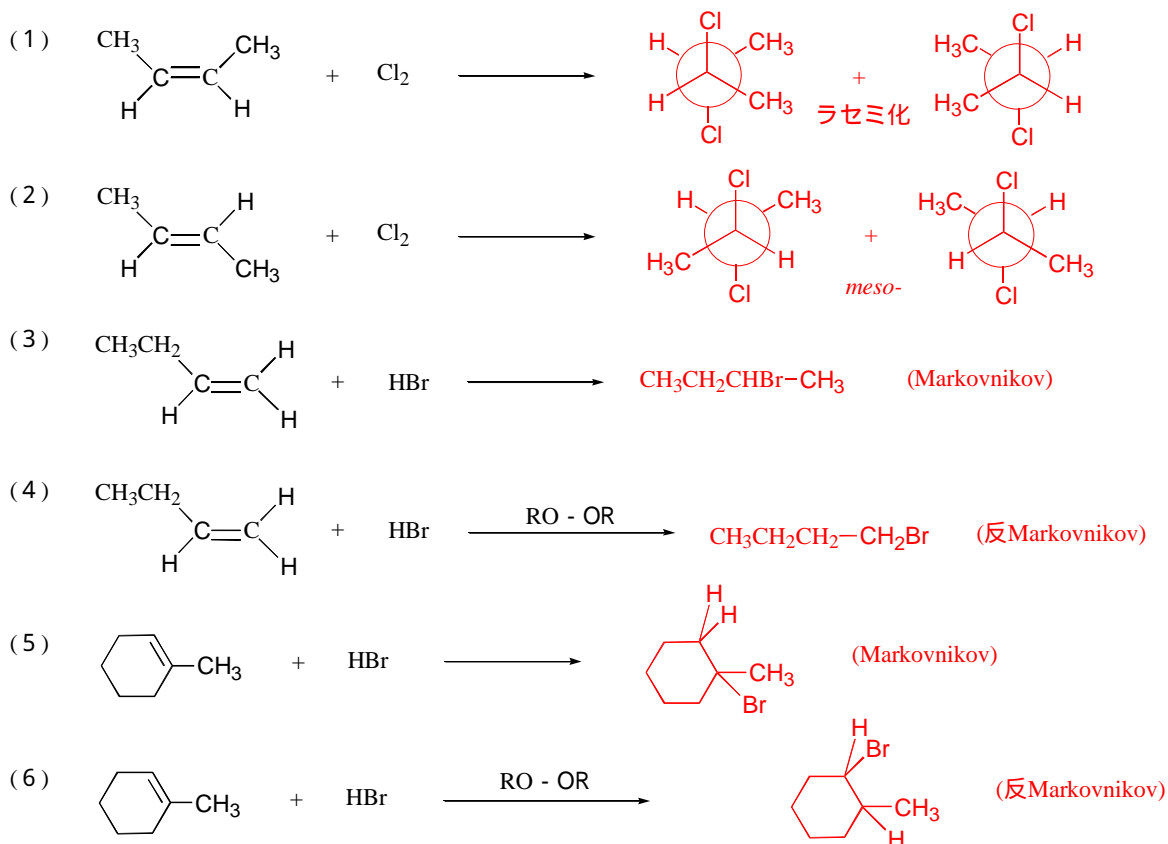


問題2. 次の各反応の主生成物を記せ。また、(1)(2)についてはE,Zを答えよ。

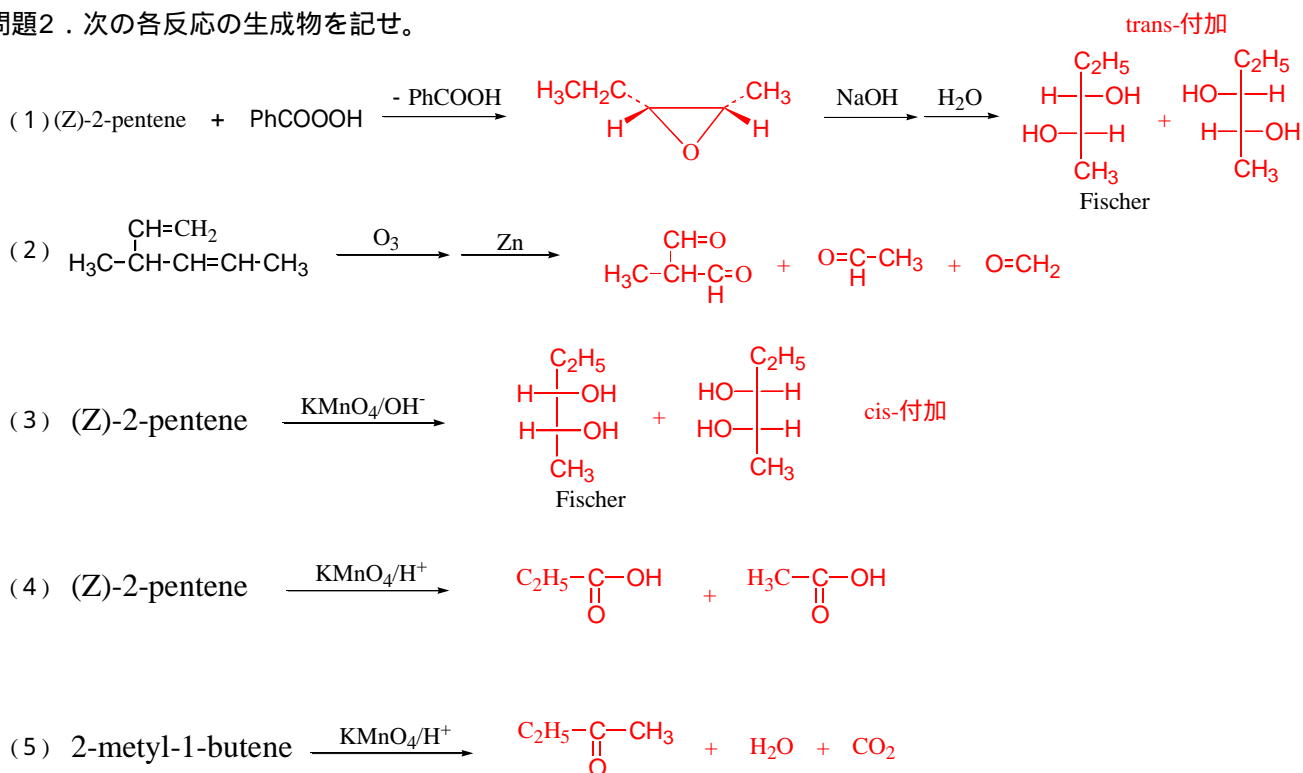


～炭素-炭素多重結合への付加反応～

問題1．次の各反応の主生成物を記せ。但し、(1)(2)はNewman投影図を用いて答えよ。

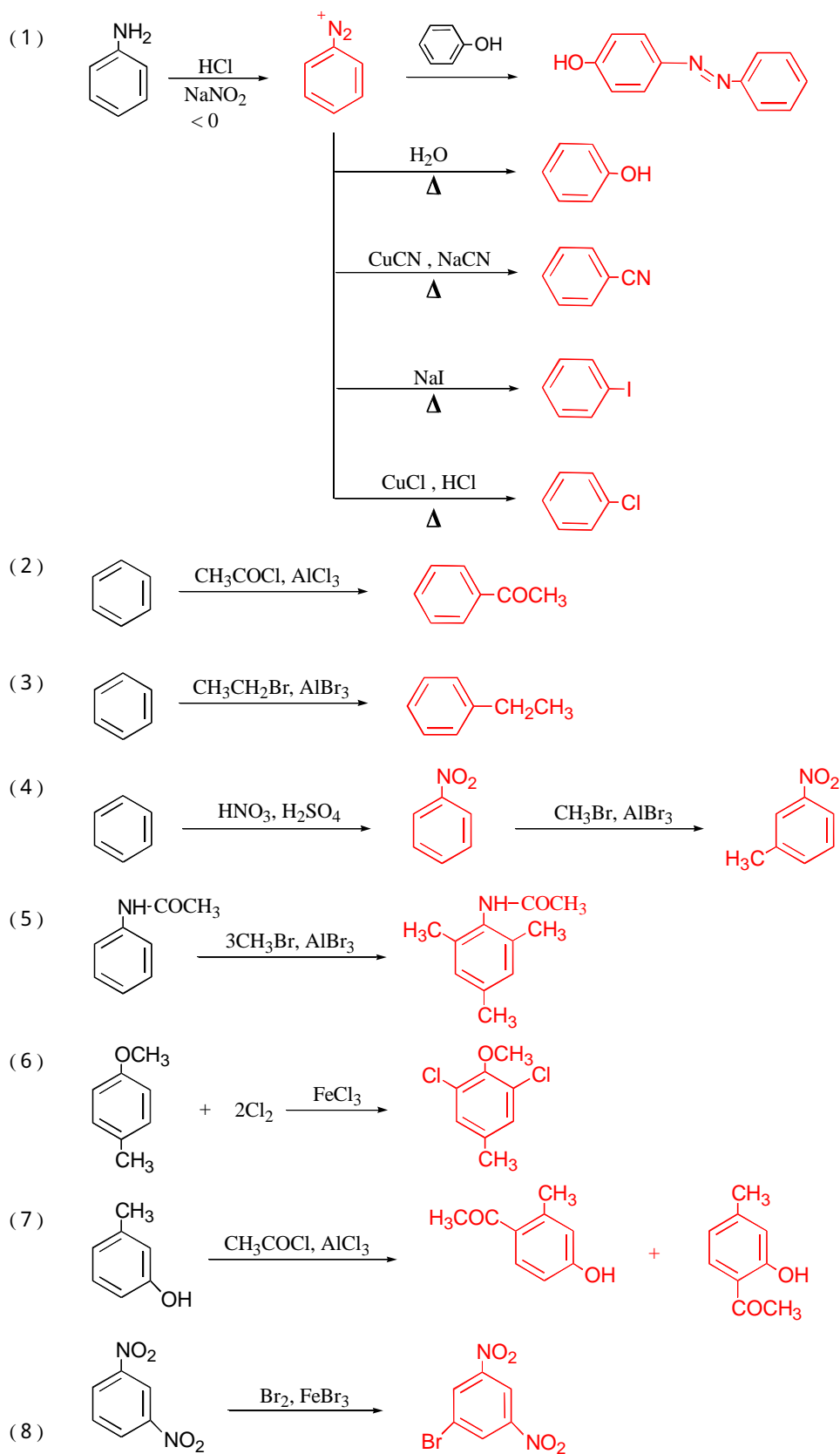


問題2．次の各反応の生成物を記せ。



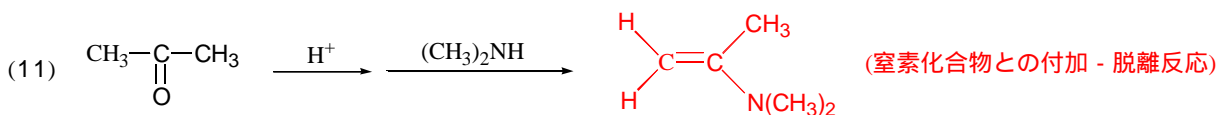
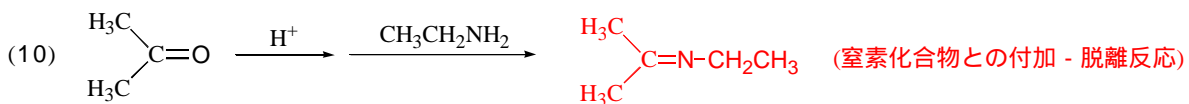
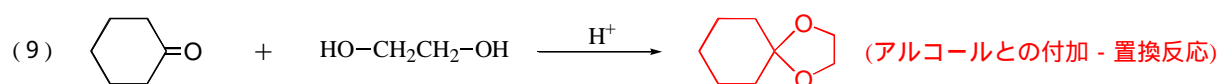
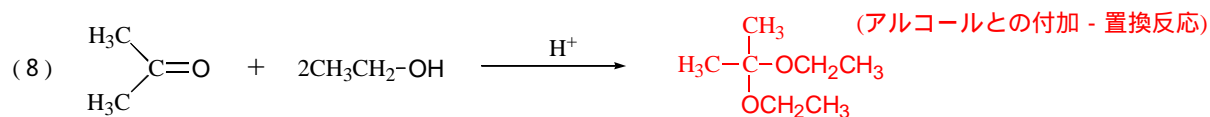
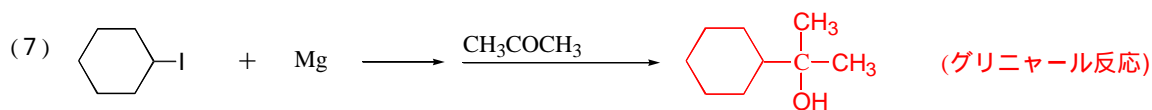
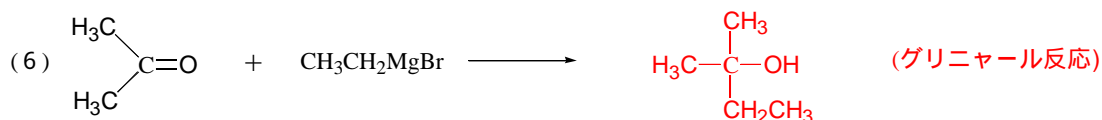
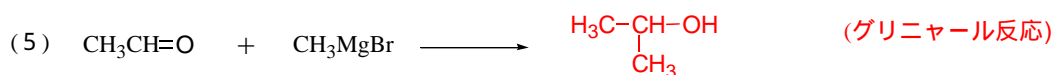
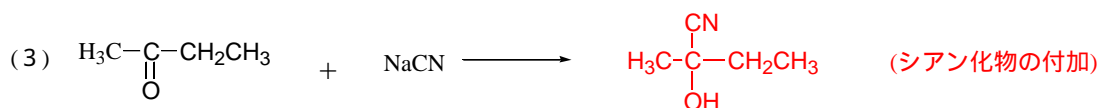
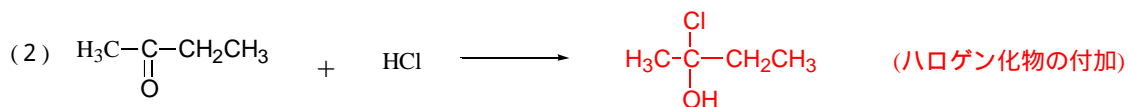
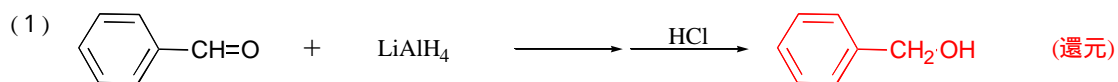
～芳香族置換反応～

問題1．次の各反応の生成物を記せ。

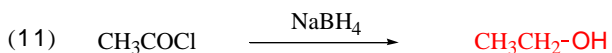
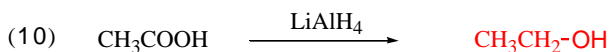
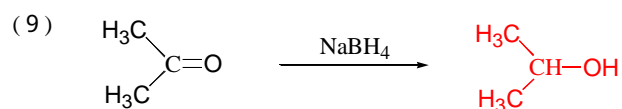
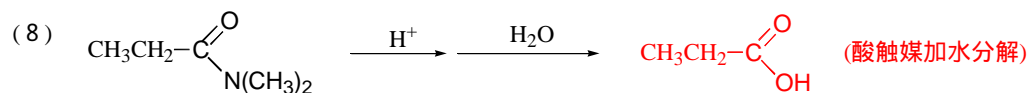
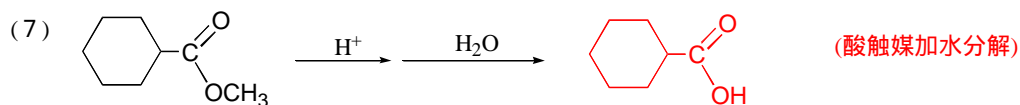
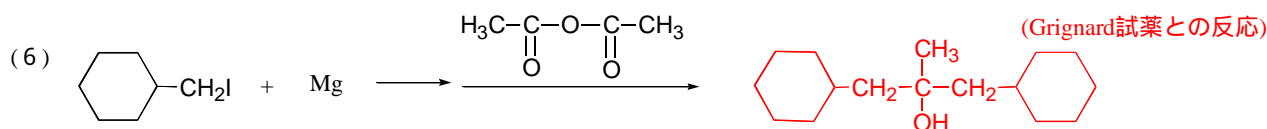
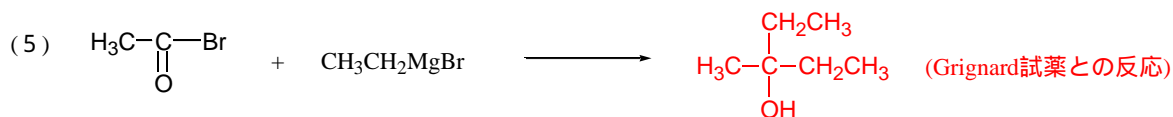
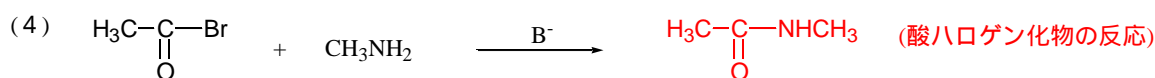
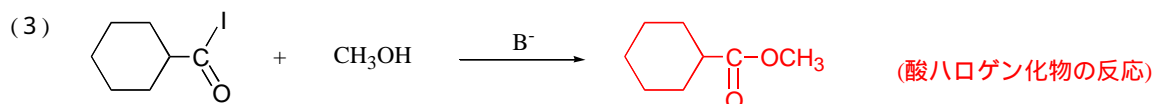
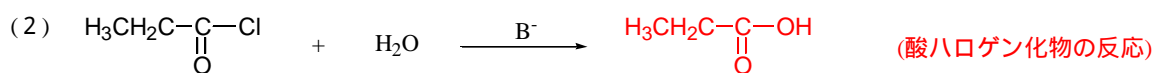


～カルボニルへの求核付加と置換～

問題1．次の各反応の生成物を記せ。



問題2. 次の各反応の生成物を記せ。



(金属水素化物による還元)

～カルボニルの 位での置換反応～

問題1. 次の各反応の主生成物を記せ。



(アルデヒドの交差アルドール反応)

