**exercise #11 Reactions of Alkyl Halide EXERCISES**

 **Organic Chem I Alfred State College**

**11.1 Boxing lessons**

Fill the reagent, conditions, substrate or products in the open boxes below

a) t-butyl bromide +

 +

 (suggest a sensible medium)

b) t-butyl bromide +

 suggest a medium

 (how do we make this ?)

c) + **CH3CH2CH2 Mg Br**

d) NaOH + **3-methyl-2-octanol**

alcohol solvent

e) C-C-C-C-Cl +OH- + H2O + X-

f) + +

 an alkane

g) CH3CH2 Br + Li, then CuBr

exercise #11 (continued)

**11.2 Make Me: Beginning Road Map Problems**

**One Step Problems**

Make 2-propanol from an 3-carbon alkyl bromide

Make 2-butene (C-C=C-C) from a 4-carbon alkyl bromide

Make O=C-OCH2CH3 from acetate anion ( O=C-O-) and an appropriate alkyl bromide

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 CH3 CH3

## Multi-Step Problems

Make diethyl ether, CH3 CH2 -O-CH2 CH3 from ethyl bromide, CH3CH2 –Br

Make from a single source of alkyl halide of 4 carbons

