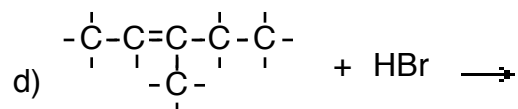
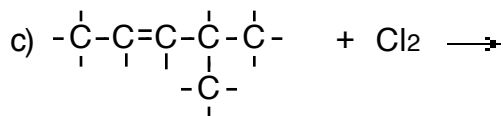
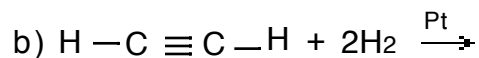
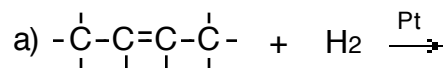


## + WS 12.9 More Organic Reactions

1. Write the structural formula of the product for each of the following **alkene** & **alkyne** reactions:



2. For d) and e) above, what rule did you use to determine what goes where? \_\_\_\_\_

3. Write an equation, using **structural** or **line** formulas, and any catalysts for the following reactions:  
*Be sure to draw both reactants AND products!*

a) hydrogenation of 2-methylpropene

b) addition of chlorine to 2-pentene (*halogenation*)

c) addition of hydrogen fluoride to 2-methyl-2-butene (*hydrohalogenation*)

d) hydration of 1-methylcyclobutene

e) addition of bromine to cyclopentene (*halogenation*)