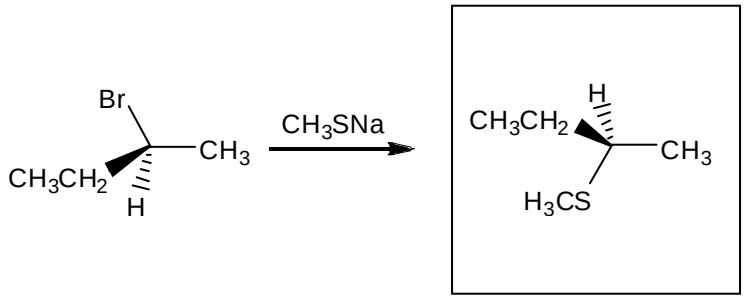
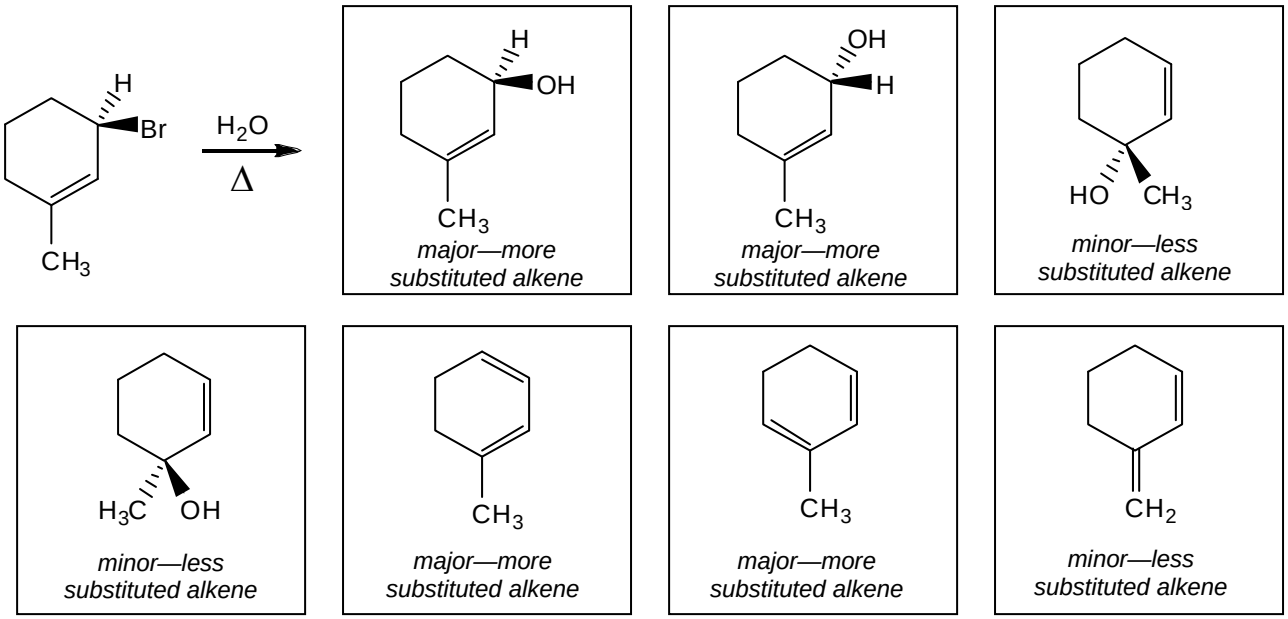
Chemistry 2301 Friday, March 6

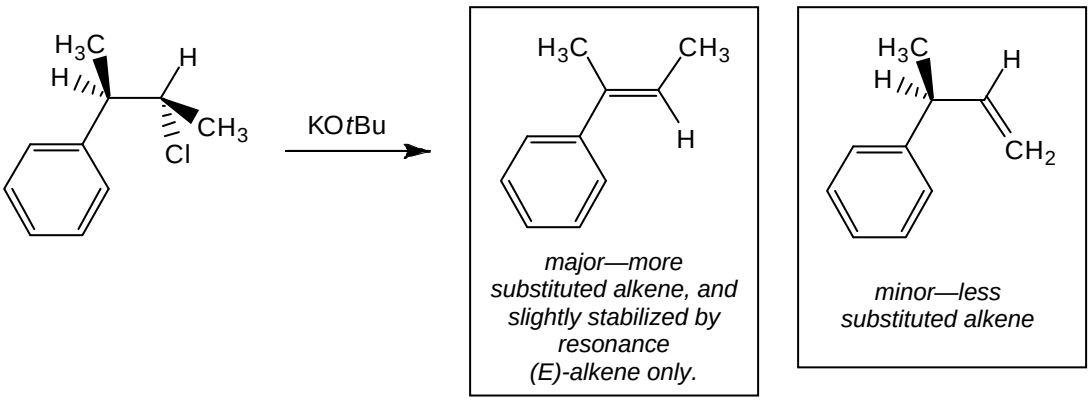
Workshop 14 Solutions
Predicting Reaction Outcomes

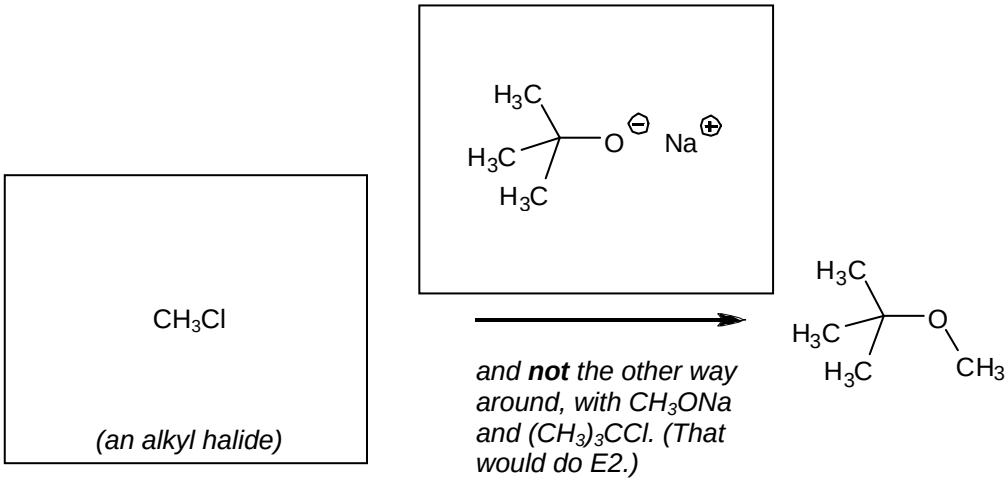
Predict the starting materials, reagents or products in the following reactions; put one molecule in each box. (Stereoisomers count as separate molecules.) If there are multiple products, state which ones are major or minor.

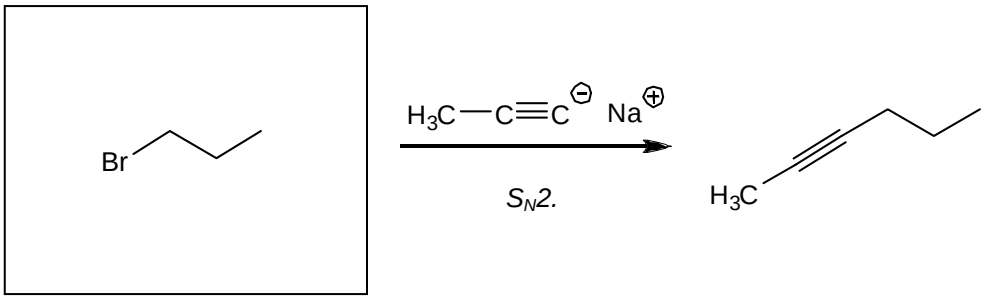


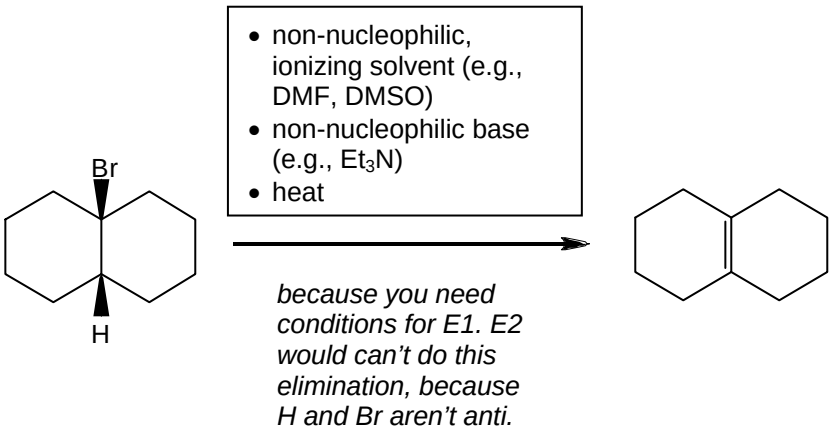
S_N2, with inversion of stereochemistry.






CH_3Cl
(an alkyl halide)
H_3C
H_3C
H_3C
O
Na
and **not** the other way around, with CH_3ONa and $(CH_3)_3CCl$. (That would do E2.)
H_3C
H_3C
H_3C
O
CH_3


Br
$H_3C—C≡C^{\ominus}$ $Na^{\oplus}$
S_N2.
H_3C


Br
H
• non-nucleophilic, ionizing solvent (e.g., DMF, DMSO)
• non-nucleophilic base (e.g., Et_3N)
• heat
because you need conditions for E1. E2 would can't do this elimination, because H and Br aren't anti.