






# From the reading quizzes...

Question 2 of 3

sapling learning this question was written by Dr. Link at University of California, Irvine Map

Decide whether each solvent below is better for  $S_N1$  or for  $S_N2$  mechanisms.

				
<input type="radio"/> Better for $S_N1$	<input type="radio"/> Better for $S_N1$	<input type="radio"/> Better for $S_N1$	<input type="radio"/> Better for $S_N1$	<input type="radio"/> Better for $S_N1$
<input type="radio"/> Better for $S_N2$	<input type="radio"/> Better for $S_N2$	<input type="radio"/> Better for $S_N2$	<input type="radio"/> Better for $S_N2$	<input type="radio"/> Better for $S_N2$

completed in class



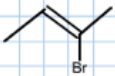

Previous Next Save And Exit

# From the reading quizzes...

Question 1 of 3

sapling learning this question was written by Dr. Linkat University of California, Irvine Map

Identify what mechanism each compound is capable of using in a substitution reaction.

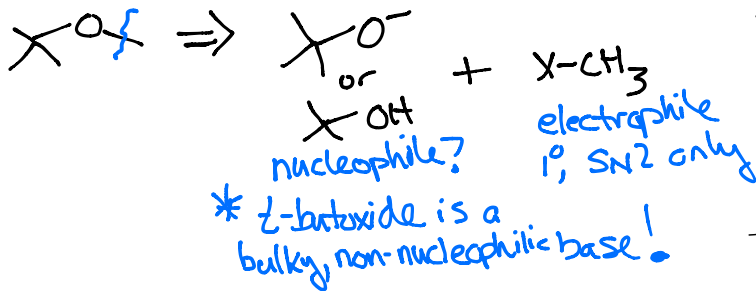
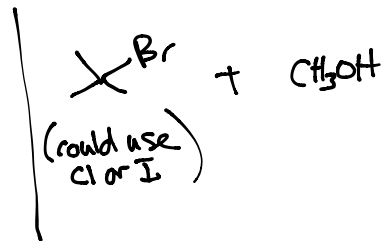
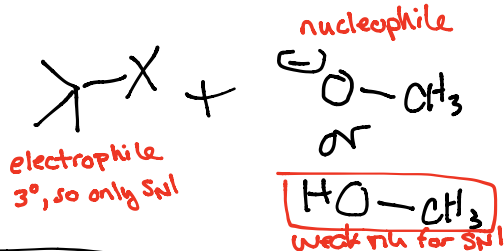
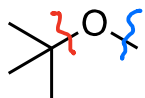
			
<input type="radio"/> S <sub>N</sub> 1 Only <input type="radio"/> S <sub>N</sub> 2 Only <input type="radio"/> Both S <sub>N</sub> 1 and S <sub>N</sub> 2 <input type="radio"/> It cannot do either	<input type="radio"/> S <sub>N</sub> 1 Only <input type="radio"/> S <sub>N</sub> 2 Only <input type="radio"/> Both S <sub>N</sub> 1 and S <sub>N</sub> 2 <input type="radio"/> It cannot do either	<input type="radio"/> S <sub>N</sub> 1 <input type="radio"/> S <sub>N</sub> 2 <input type="radio"/> Both S <sub>N</sub> 1 and S <sub>N</sub> 2 <input type="radio"/> It cannot do either	<input type="radio"/> S <sub>N</sub> 1 <input type="radio"/> S <sub>N</sub> 2 <input type="radio"/> Both S <sub>N</sub> 1 and S <sub>N</sub> 2 <input type="radio"/> It cannot do either

completed in class

Previous Next Save And Exit

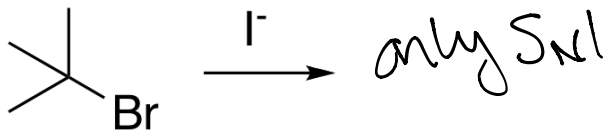
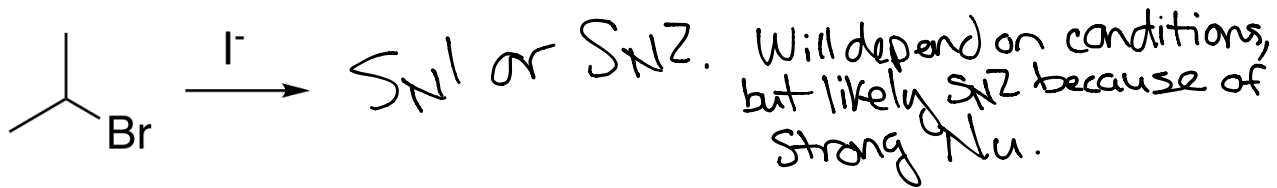
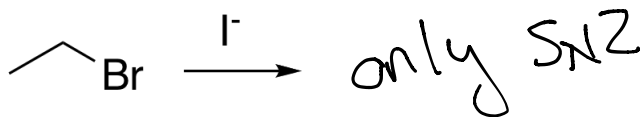
# How can we make this?

Two ways to consider

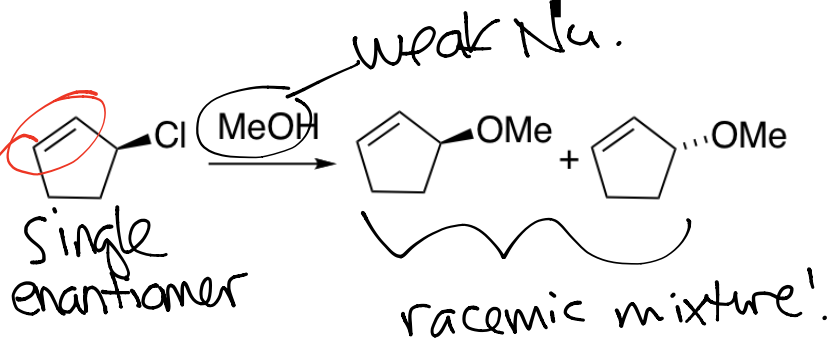


This synthesis will not work because t-butoxide is non-nucleophilic! To make the desired product, the S<sub>N</sub>1 synthesis above would be required.

# What is possible? Why?



# From the podcasts...



→ Important!

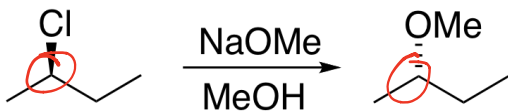


Factors

- 1°, allylic
- weak Nu
- polar protic solvent

Nu = solvent!

# Another from the podcasts...



SN2, so stereocenter inverted.  
still single enantiomer

## Factors

- 2° alkyl halide  $\Rightarrow$  SN1 or SN2
- Strong Nu  $\Rightarrow$  SN2
- polar protic solvent  $\Rightarrow$  better for SN1 but SN2 possible.

} result  
SN2

# Make a flow chart!

How do you decide if it's  $S_N1$  or  $S_N2$ ?

What should you ask yourself first?

Then what?

*Make sure you do this yourself!*

---

# Alkene Stability

Identify which of the below structures is a *cis*-isomer, a *trans*-isomer or neither. Determine the relative thermodynamic stability of the compounds.



- cis*
- trans*
- neither

- cis*
- trans*
- neither

- cis*
- trans*
- neither

- Most stable
- Middle stable
- Least stable

- Most stable
- Middle stable
- Least stable

- Most stable
- Middle stable
- Least Stable

Completed in class



# Less than half of the class got this right!

sapling learning this question was written by Dr. Link at University of California, Irvine Map

Which of the following compounds will **not** undergo any elimination reaction?

A  
 B  
 C  
 D  
 E  
 F

CC(C)(C)Br A      Br B      CC(C)(C)CC C

C1CCCCC1I D      CC=C E      CCBr F

Completed in class

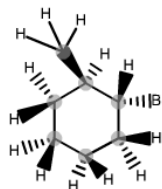
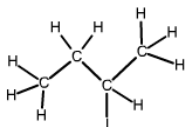
# Reading Quiz Question

sapling learning

this question was written by  
Dr. Link at University of California, Irvine

Map

For each compound below, select (click on) all protons that can be used to do an E2 elimination. Selected atoms will turn green.



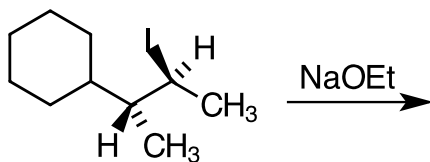
completed in class

Draw elimination product(s), mechanism, and transition state



Completed in class

Draw elimination mechanism and  
product(s)



completed in class

Hint: Newman projection useful!

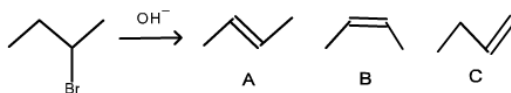
# Draw elimination product(s)

(1R,2R)-1-bromo-2-methylcyclohexane  
with potassium hydroxide

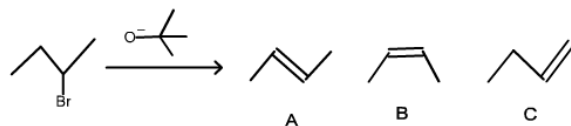
completed in class

# Base Matters!

For each of the elimination reactions below, select the major product.



<input type="radio"/>	A
<input type="radio"/>	B
<input type="radio"/>	C

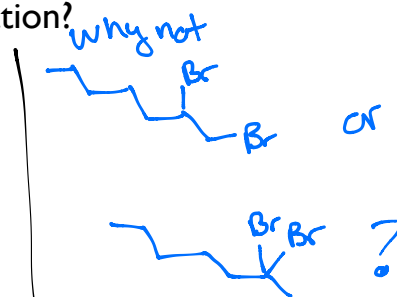
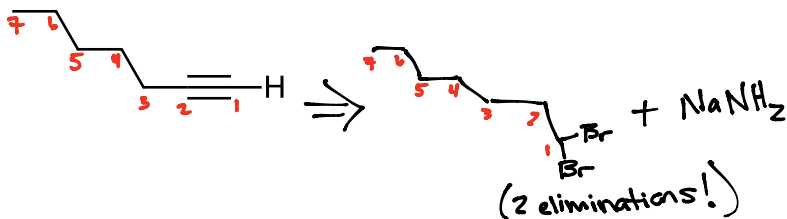


<input type="radio"/>	A
<input type="radio"/>	B
<input type="radio"/>	C

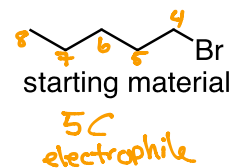
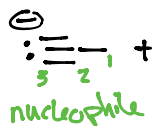
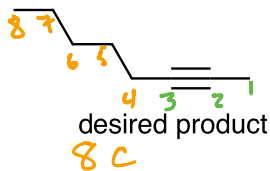
Completed in class

# Synthesis questions

How would you synthesize this compound using elimination?



Show a synthesis route for this compound from the given starting material. Can you use elimination?



Product has more carbons than starting material. Can't use elimination. Must use substitution.