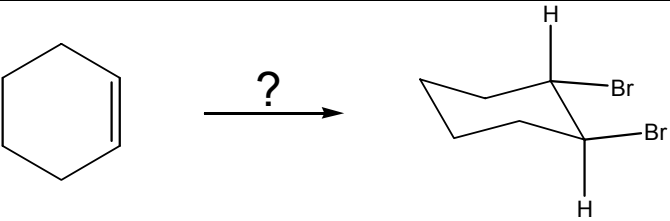
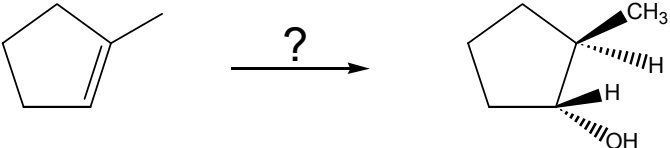


Organic Chemistry					Return to Game Selection Page
Single Jeopardy: Transformations of alkanes, alkenes, alkynes and organic halides.					
Reagents Alkenes	Reagents Alkynes	Reagents Halides	Reagents Misc	Name the Pathway	Trends
50	50	50	50	50	50
100	100	100	100	100	100
150	150	150	150	150	150
200	200	200	200	200	200
250	250	250	250	250	250

### Single Jeopardy Answers

#### 1. Reagents - Alkenes

Pts	Answer	Question
50	ethene $\xrightarrow{?}$ ethane	
100	$\text{CH}_3\text{---CH=CH}_2 \xrightarrow{?} \text{CH}_3\text{---CH(Br)---CH}_3$	
150		
200	$\text{CH}_3\text{---CH=CH---CH}_3 \xrightarrow{?} \text{CH}_3\text{---CH}_2\text{---CH(OH)---CH}_3$	
250		

Transformations of alkanes, alkenes, alkynes and organic halides

2. Reagents - Alkynes

Pts	Answer	Question
50	$\text{CH}_3-\text{C}\equiv\text{C}-\text{CH}_3 \xrightarrow{?} \text{CH}_3-\text{CH}_2-\overset{\text{Cl}}{\underset{\text{Cl}}{\text{C}}}-\text{CH}_3$	
100	$\text{CH}_3\text{CH}_2\text{C}\equiv\text{CH} \xrightarrow{?} \text{CH}_3\text{CH}_2\text{C}\equiv\text{C}^{\ominus}\text{Na}^{\oplus}$	
150	$\text{HC}\equiv\text{C}^{\ominus}\text{Na}^{\oplus} \xrightarrow{?} \text{HC}\equiv\text{C}-\text{CH}_2\text{CH}_3$	
200	$\text{CH}_3\text{CH}_2\text{C}\equiv\text{CCH}_2\text{CH}_3 \xrightarrow{?} \text{CH}_3\text{CH}_2-\overset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}-\text{CH}_2\text{CH}_3$	
250	$\text{CH}_3\text{CH}_2\text{C}\equiv\text{CCH}_2\text{CH}_3 \xrightarrow{?} \text{CH}_3\text{CH}_2-\overset{\text{H}}{\text{C}}=\overset{\text{H}}{\text{C}}-\text{CH}_2\text{CH}_3$	

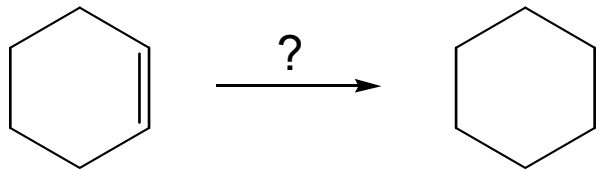
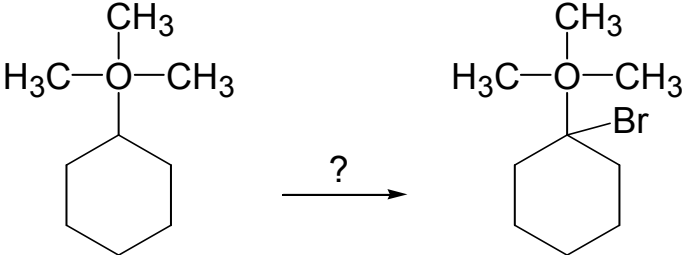
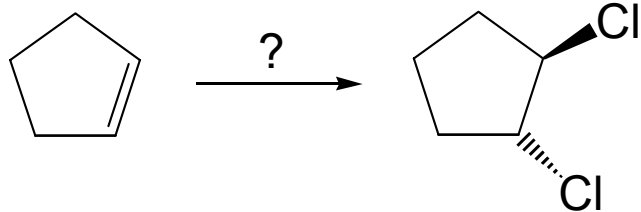
Transformations of alkanes, alkenes, alkynes and organic halides

3. Reagents - Halides

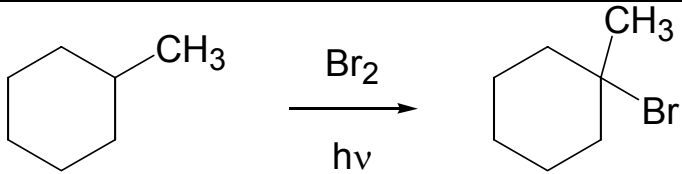
Pts	Answer	Question
50	$\text{CH}_3\text{Cl} \xrightarrow{\quad ? \quad} \text{CH}_3\text{OH}$	
100	$\begin{array}{c} \text{CH}_3 \\   \\ \text{H}_3\text{C}-\text{C}-\text{CH}_3 \\   \\ \text{Br} \end{array} \xrightarrow{\quad ? \quad} \begin{array}{c} \text{CH}_3 \\ / \\ \text{H}_2\text{C}=\text{C} \\ \backslash \\ \text{CH}_3 \end{array}$	
150	$\begin{array}{c} \text{CH}_3 \\   \\ \text{H}_3\text{C}-\text{C}-\text{CH}_2\text{CH}_3 \\   \\ \text{I} \end{array} \xrightarrow{\quad ? \quad} \begin{array}{c} \text{CH}_3 \\   \\ \text{H}_3\text{C}-\text{C}-\text{CH}_2\text{CH}_3 \\   \\ \text{OH} \end{array}$	
200	$\begin{array}{c} \text{H}_3\text{C} \quad \text{CH}_3 \\   \quad   \\ \text{H}_3\text{C}-\text{C}-\text{C}-\text{CH}_3 \\   \quad   \\ \text{Br} \quad \text{Br} \end{array} \xrightarrow{\quad ? \quad} \begin{array}{c} \text{H}_3\text{C} \quad \text{CH}_3 \\ \backslash \quad / \\ \text{C}=\text{C} \\ / \quad \backslash \\ \text{H}_3\text{C} \quad \text{CH}_3 \end{array}$	
250	$\begin{array}{c} \text{CH}_3 \\   \\ \text{H}_3\text{C}-\text{C}-\text{CH}_2-\text{CH}_3 \\   \\ \text{Br} \end{array} \xrightarrow{\quad ? \quad} \left\{ \begin{array}{l} \begin{array}{c} \text{H}_3\text{C} \quad \text{H} \\ \backslash \quad / \\ \text{C}=\text{C} \\ / \quad \backslash \\ \text{H}_3\text{C} \quad \text{CH}_3 \end{array} \\ \text{and} \\ \begin{array}{c} \text{CH}_3 \\   \\ \text{H}_3\text{C}-\text{C}-\text{CH}_2-\text{CH}_3 \\   \\ \text{OCH}_3 \end{array} \end{array} \right.$	

Transformations of alkanes, alkenes, alkynes and organic halides

4. Reagents - Miscellaneous

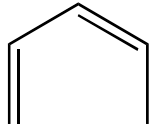
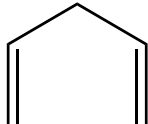
Pts	Answer	Question
50		
100		
150	$\text{CH}_3\text{CH}=\text{CHCH}_3 \xrightarrow{?} \text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\text{H}$	
200		
250	$\text{CH}_3\text{CH}_2\text{CH}=\text{CH}_2 \xrightarrow{?} \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$	

5. Name the pathway

Pts	Answer	Question
50	$\text{CH}_3\text{CH}=\text{CHCH}_3 \xrightarrow[\text{Pt}]{\text{H}_2} \text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$	
100	$\text{CH}_3\text{CH}_2\text{CH}_2\text{Cl} \xrightarrow{\text{HO}^-} \text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$	
150	$\text{H}_3\text{C}-\overset{\text{CH}_3}{\text{C}}=\text{CHCH}_3 \xrightarrow{\text{HI}} \text{H}_3\text{C}-\overset{\text{CH}_3}{\underset{\text{I}}{\text{C}}}-\text{CH}_2\text{CH}_3$	
200	$\text{H}_3\text{C}-\overset{\text{CH}_3}{\underset{\text{I}}{\text{C}}}-\text{CH}_2-\text{CH}_3 \xrightarrow{\text{HO}^-} \text{H}_3\text{C}-\overset{\text{H}_3\text{C}}{\text{C}}=\text{CH}-\text{CH}_3$	
250		

Transformations of alkanes, alkenes, alkynes and organic halides

6. Trends

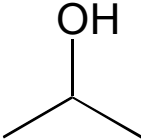
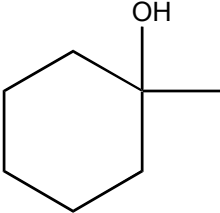
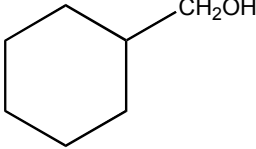
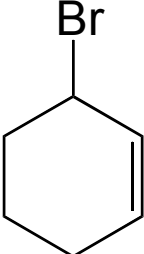
Pts	Answer	Question
50	$O > C$	
100	$HS^- > HO^-$	
150	$CH_3-CH_2^+ > CH_3^+$	
200	$CH_3^- > HO^-$	
250	 $>$ 	

# Transformations of alkanes, alkenes, alkynes and organic halides

Organic Chemistry		<a href="#">Return to Single Jeopardy Board</a> or to <a href="#">Game Selection Page</a>			
Double Jeopardy: Transformations of alkanes, alkenes, alkynes and organic halides					
Starting Matr'ls	Numeric Values	Acids Base	Class of Rxn	Should Know	Pot-pourri
100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

## Double Jeopardy Answers

### 7. Starting Materials

Pts	Answer	Question
100	??? $\xrightarrow[h\nu]{\text{Cl}_2}$ $\text{CH}_3\text{CH}_2\text{Cl}$	
200	??? $\xrightarrow[\text{H}_2\text{O}]{\text{H}_3\text{O}^+}$ 	
300	??? $\xrightarrow[\text{demercuration}]{\text{oxymercuration}}$ 	
400	??? $\xrightarrow[\text{oxidation}]{\text{hydroboration}}$ 	
500	??? $\xrightarrow{\text{NBS}}$ 	

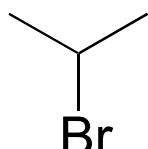
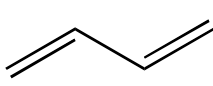
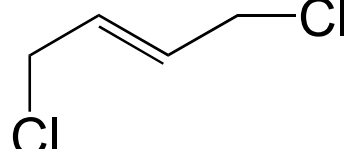
### 8. Numeric Values

Pts	Answer	Question
100	35	
200	109.5°	
300	3-5 units	
400	15 kcal/mol	
500	16	

9. Acids and Bases

Pts	Answer	Question
100	electron donor	
200	proton acceptor	
300	$\text{NH}_2^-$	
400	$\text{ROH}_2^+$	
500	$\frac{[\text{H}^+][\text{A}^-]}{[\text{HA}]}$	

10. Class for Reaction

Pts	Answer	Question
100	$\text{CH}_3\text{Cl} \xrightarrow{\text{Br}^-} \text{CH}_3\text{Br}$	
200	$\text{CH}_2=\text{CH}_2 \xrightarrow[\text{Pt}]{\text{H}_2} \text{CH}_3\text{CH}_3$	
300	$\text{CH}_3\text{CH}_2\text{CH}_3 \xrightarrow[\text{h}\nu]{\text{Br}_2}$ 	
400	$\text{NH}_2^- + \text{CH}_3\text{OH} \rightarrow \text{CH}_3\text{O}^- + \text{NH}_3$	
500	 + $\text{Cl}_2 \rightarrow$ 	

### 11. Things you Should Know

Pts	Answer	Question
100	The complete name(s) of the author(s) of your book.	
200	The edition of your textbook	
300	The type of reaction displayed on the front of the course web site.	
400	The workshop abbreviation PLTL stands for this.	
500	A factor of 10 in an equilibrium constant corresponds to this in kcal/mole.	

### 12. Potpourri

Pts	Answer	Question
100	The three things a carbocation will "consider".	
200	27-28 kcal mol <sup>-1</sup>	
300	HO <sup>-</sup> (RO <sup>-</sup> ) functions as a leaving group only under these circumstances.	
400	The two entities never present in the same flask at the same time	
500	What is never formed in solution during any organic reaction.	