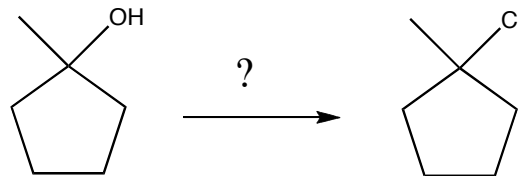
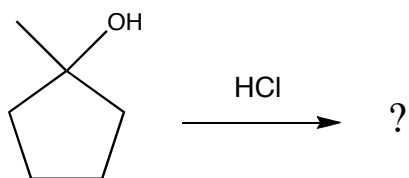
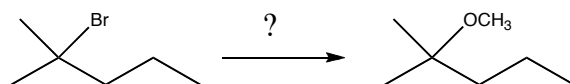
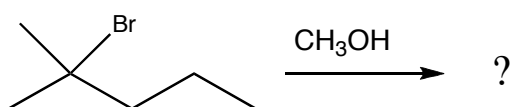


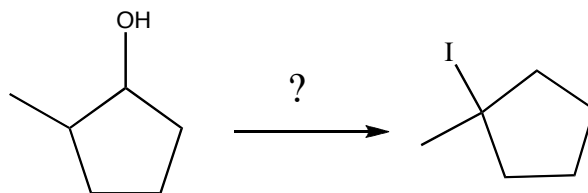
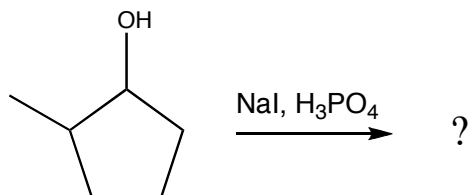
Product of SN1 reaction?



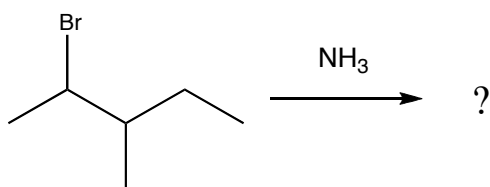
Product of SN1 reaction?



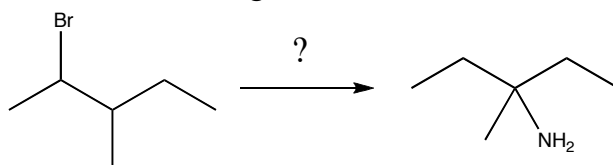
Product of SN1 reaction?



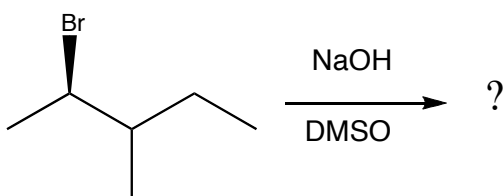
Product of SN1 reaction?



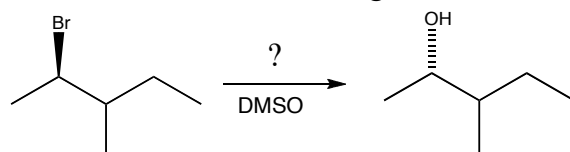
Rearrangement occurs

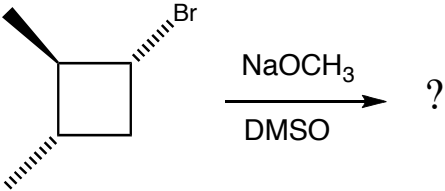
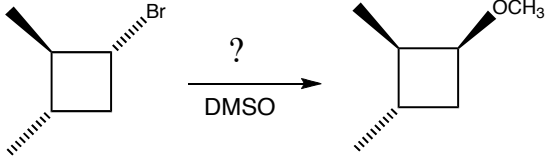
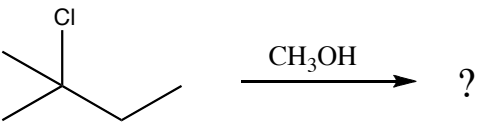
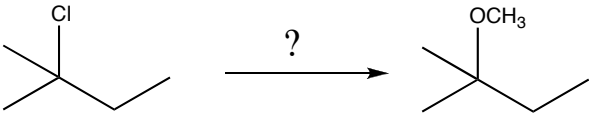
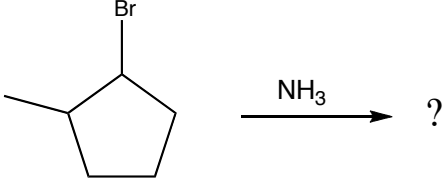
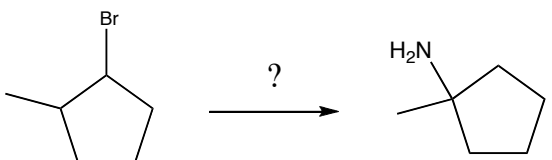
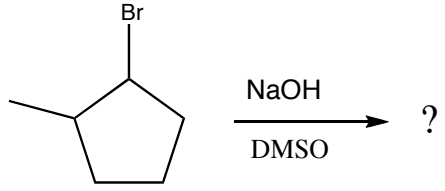
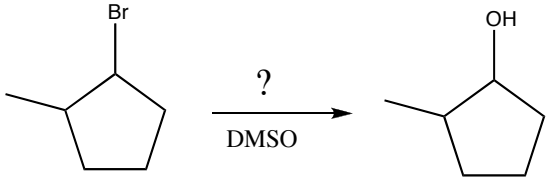


Product of SN2 reaction?



Inversion of configuration



<p>Product of SN2 reaction?</p> 	
<p>Does the reaction proceed by SN1 or SN2? What is the product?</p> 	<p>SN1 3° substrate, polar protic solvent</p> 
<p>Does the reaction proceed by SN1 or SN2?</p> 	<p>SN1 2° substrate, polar protic solvent</p> 
<p>Does the reaction proceed by SN1 or SN2?</p> 	<p>SN2 2° substrate, polar aprotic solvent</p> 
<p>Which of the following is the stronger nucleophile?</p> <p>H₂S or H₂O</p>	<p>H₂S</p>

<p>Which of the following is the stronger nucleophile?</p> <p>NH₃ or H₂O</p>	<p>NH₃</p>
<p>Which of the following is the stronger nucleophile?</p> <p>NH₃ or PH₃</p>	<p>PH₃</p>
<p>Which of the following is the stronger nucleophile?</p> <p>CH₃O[⊖] or CH₂CH₃O[⊖]</p>	<p>CH₃O[⊖]</p>
<p>Which of the following is the stronger nucleophile?</p> <p>CH₃CH₂O[⊖] or CH₃CH₂OH</p>	<p>CH₃CH₂O[⊖]</p>
<p>Characteristics of an SN₂ reaction mechanism</p>	<p>A. good leaving group B. strong nucleophile C. methyl, 1° or 2° substrate D. bimolecular transition state E. inversion of configuration F. transference of optical activity</p>

Characteristics of an SN1 reaction mechanism	A. good leaving group B. typically weak nucleophile C. 2° or 3° substrate D. unimolecular transition state E. carbocation intermediates that may rearrange F. loss of optical activity (racemization)
Some examples of nonpolar solvents	hexane, benzene, CCl ₄
Some examples of polar protic solvents	methanol, acetic acid, water
Some examples of polar aprotic solvents	acetone, DMSO, ether, CH ₂ Cl ₂
Definition of a substitution reaction	One atom or group of atoms in the product replaces another atom or group of atoms in the starting material

<p>Definition of an addition reaction</p>	<p>One or more atoms or groups of atoms are added to the starting substrate</p>
<p>Definition of an elimination reaction</p>	<p>One or more atoms or groups of atoms are removed from the starting substrate</p>
<p>Definition of a rearrangement reaction</p>	<p>An atom or group of atoms moves from one position to another</p>
<p>Compounds with good leaving groups: R-I, R-Br, R-Cl, R-OTs, protonated R-OH group</p>	<p>Compounds with poor leaving groups: R-F, R-OH, R-NH₂</p>
<p>Unsaturated compounds with good leaving groups: Benzylic and allylic halides and tosylates</p>	<p>Unsaturated compounds with poor leaving groups: Halobenzenes and tosyl benzenes vinyl halides and vinyl tosylates</p>