Handout VII – Substitution Reactions

1. Fill in the table.

T. I III III the table.		
	S _N 1	S _N 2
Number of Steps		
General Mechanism		
Kinetics		
Stereochemistry		
Substrate		
Solvent		
Competing Reactions		

2. Draw the product(s) of each S_N 2 reaction. Include stereochemistry where appropriate.

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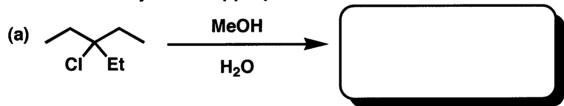
(a)

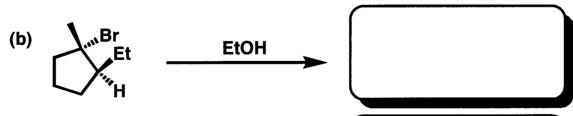
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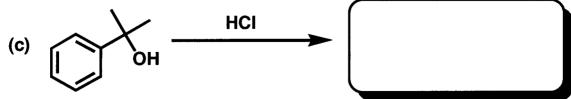
NaCN

DMF

- CI CH₃SNa CH₃CN
- (c)
 CH₃CH₂CH₂CI + CH₃CH₂ONa Acetone
- 3. Draw the product(s) of each $S_{\rm N}1$ reaction. Include stereochemistry where appropriate.







4. Determine whether these reactions follow an S_N1 or S_N2 mechanistic pathway. Explain why you decided upon the pathway you chose, predict the products in each case, and draw curved arrows.

