Power Point Study– 07-3Substitution Reactions SN1  

Name:__________________________  

For SN\textsuperscript{1} – need 3° substrate, good leaving group, weak Nu\textsuperscript{-} or even the solvent, e.g. H\textsubscript{2}O, CH\textsubscript{3}OH etc can be the Nu\textsuperscript{-} (solvolysis)  

1) Use the equation below to answer the questions below.
\[ \text{Rate} = k [A]^0 [B]^1 \]

a) What is the order of reaction?

b) What is the order of reaction with respect to B?

c) What will happen to the rate of reaction if the concentration of A is doubled?

2) Circle the substrate in the pairs given that will undergo SN\textsubscript{1} faster.

a)  

b)  

c)  

3) Which of the following SN\textsubscript{1} reactions will go faster in each of the pairs?

a).  

b).  

4) Write the missing substrate, product or nucleophile in the following reactions.

a)  

b)