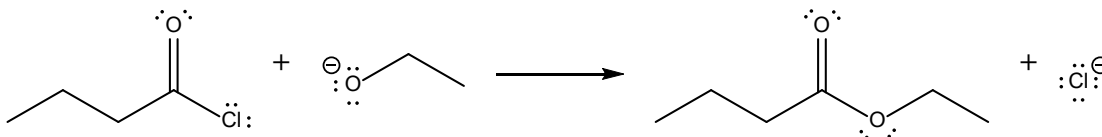


Exercise 11.3

Categories of Organic Reactions

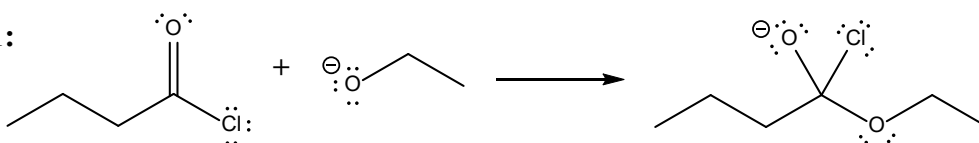
1. Fill in each blank with either “addition”, “elimination” or “substitution”.

At first glance the following reaction appears to be a(n) _____:

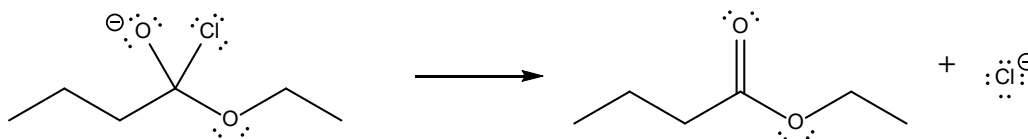


If you look at its mechanism, however, you can see that this is actually a 2-step process:

Step 1:



Step 2:



The first step is a(n) _____ while the second step is a(n) _____ . As such, this reaction is more properly described as a(n) _____ - _____ reaction (*in which the first word refers to the classification of the first step and the second word refers to the classification of the second step*).

2. These questions refer to the reaction shown in Question 1.
- Identify the nucleophile in Step 1.
 - Identify the electrophile in Step 1.
 - Add curved arrows to show the movement of electrons in Step 1.
 - Add curved arrows to show the movement of electrons in Step 2.

Please note that we do not use curved arrows to show the movement of electrons on the overall reaction. Doing so would give the mistaken impression that there was only one step.