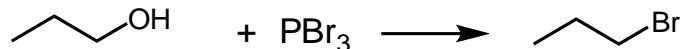


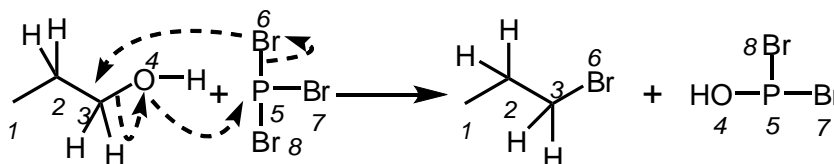
Problem 1



1. Draw all of the bonds at the reactive atoms in the starting materials
2. Draw all of the H-atoms at or near the reactive sites of the starting materials and products
3. Balance the equation
4. Number the non-H atoms
5. Identify bonds made and broken

Bonds made: 4-5, 3-6

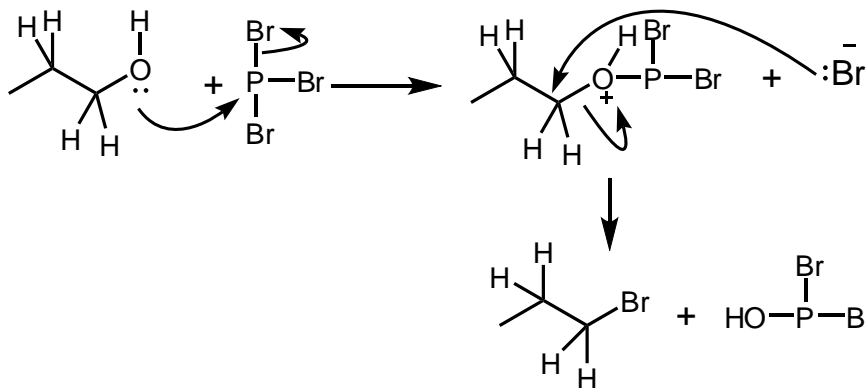
Bonds broken: 3-4, 5-6.



Identify the conditions

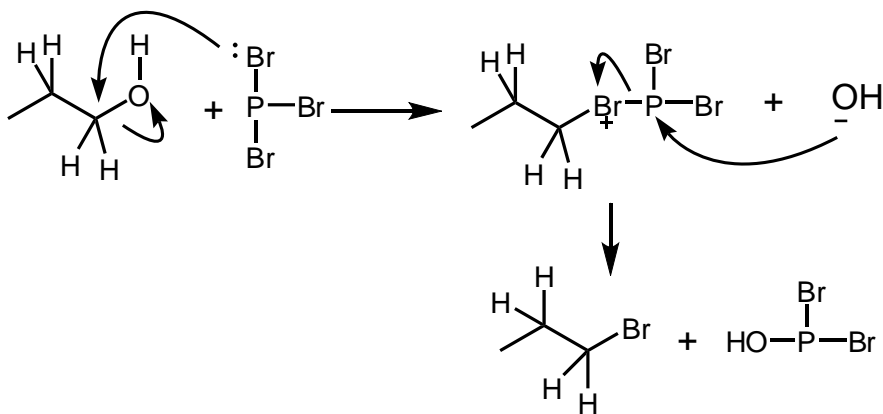
Acidic

Mechanism:



Discussion

The determination of reaction conditions is very important for the drawing of reaction mechanisms. It allows one to decide whether to generate acid stable or base stable intermediates. For the above problem, the conditions are acidic. If the conditions are identified incorrectly, then one may be tempted to draw the following incorrect mechanism.



If you are struggling in the identification of the reaction conditions in this problem then do the following. Ask yourself, do I see any base which is equal or better than the OH^- group in the starting materials? The answer is no. So, the first step cannot be the elimination of OH^- . The OH^- is a good base and a bad leaving group.