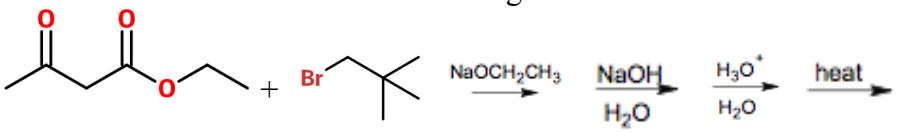
Worksheet #10

	Starting material	Product	Starting material identification
Acetoacetic Ester Synthesis			
Malonic Ester Synthesis			

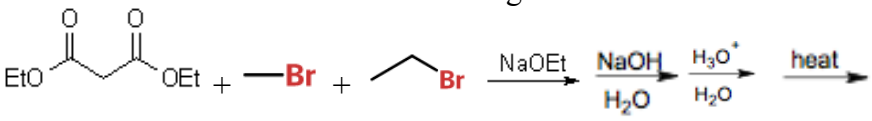
1. Show the mechanism of the following reaction



2. Prepare the following molecules using Acetoacetic Ester synthesis

a. 3-propyl-hexanone b. 3-ethyl-4-pentenone c. 1-cyclohexylethan-1-one

3. Show the mechanism of the following reaction

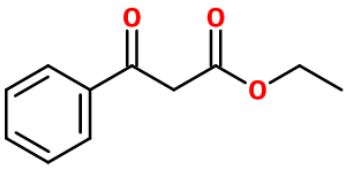


4. Prepare the following molecules using Malonic Ester Synthesis

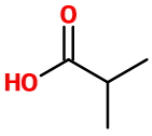
a. 3-phenyl-propanoic acid b. 3,3-dimethylbutanoic acid c. 2-ethyl-4-methylpentanoic acid

5. For the following molecules, determine what synthesis is used and what the starting materials/reagents are

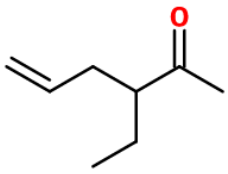
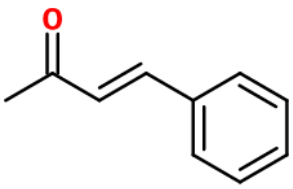
a.



b.



c.



d.