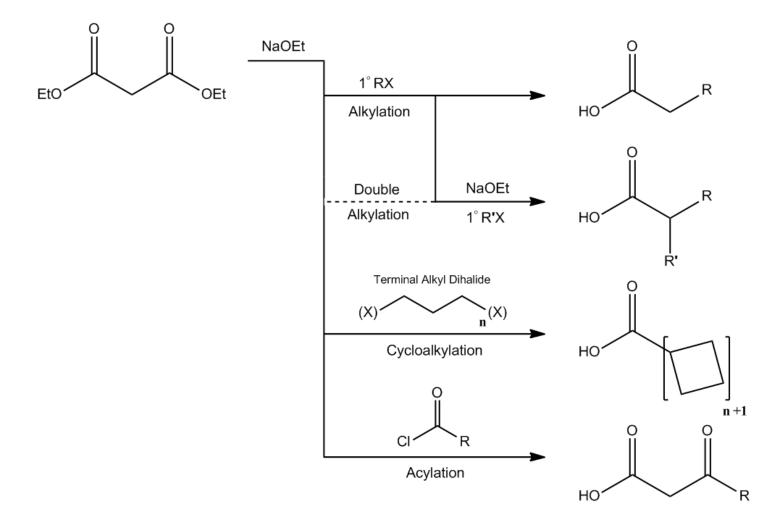
CONCEPT: MALONIC ESTER SYNTHESIS—GENERAL REACTIONS



EXAMPLE: Predict the products of the following multi-step reactions

CH₂(CO₂Et)₂

$$\begin{array}{c}
1. \text{ NaOC}_{2}\text{H}_{5} \\
2. (\text{CH}_{3})_{2}\text{CHCH}_{2}\text{CI} \\
\hline
3. \text{ H}_{3}\text{O}^{+} \\
4. \Delta
\end{array}$$

PRACTICE: Provide the major product for the following reaction

$$H_3C$$
 O O O CH_3

- 1. 2 moles NaOEt, EtOH 2. BrCH₂CH₂CH₂Br
- 3. NaOH, H₂O, H₃O⁺
 4. LiAlH₄

PRACTICE: Provide the major product for the following reaction

H₃C O CH₃

$$\begin{array}{c}
1. \text{ NaOEt, EtOH} \\
2. \text{ CH}_3\text{CH}_2\text{CH}_2\text{Br} \\
\hline
3. \text{ NaOH, H}_2\text{O, H}_3\text{O}^+ \\
4. \text{ Heat}
\end{array}$$