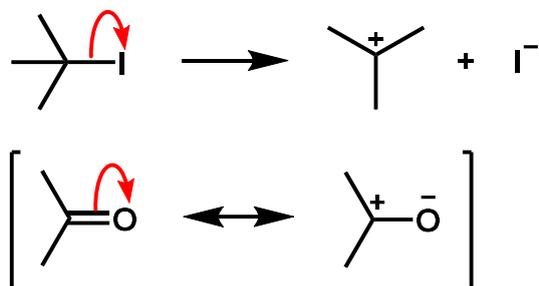


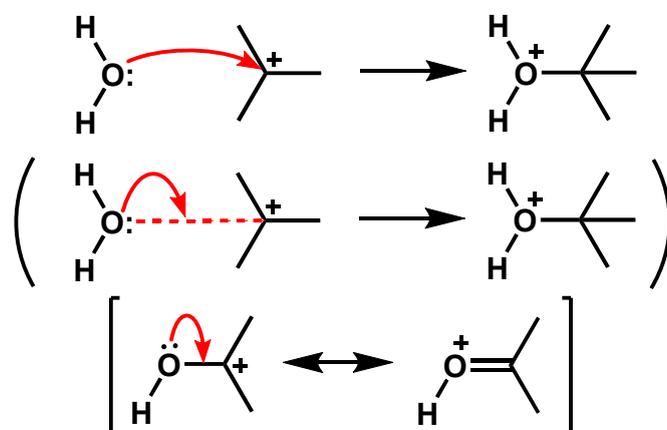
矢印のコツ

基本は3つ（ラジカルは除く）

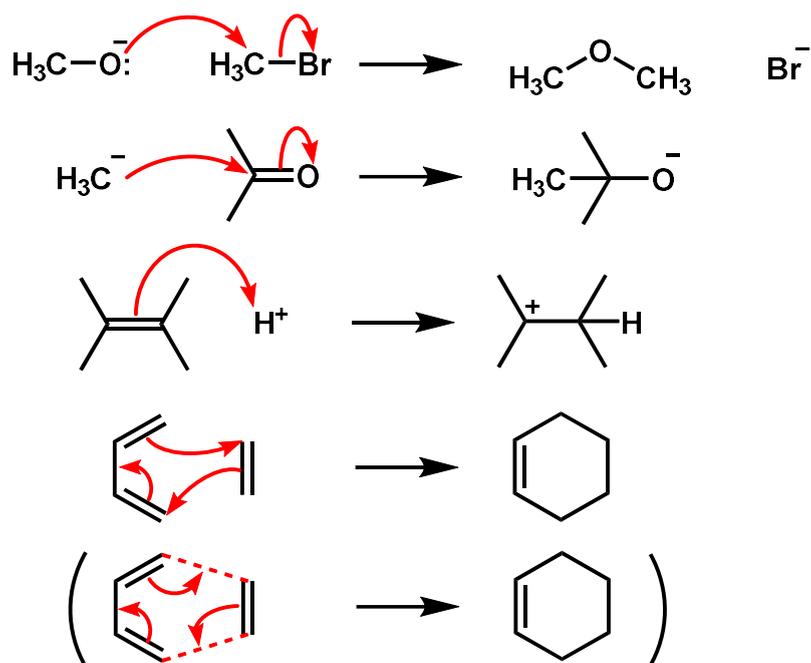
① 結合が切れる（ヘテロリシス）。



② 結合ができる。



③ 結合ができつつ、別の結合が切れる。

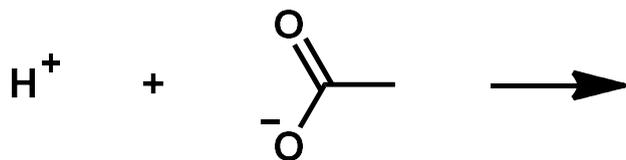


電子の流れを表す矢印

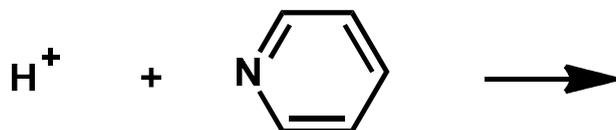
例：



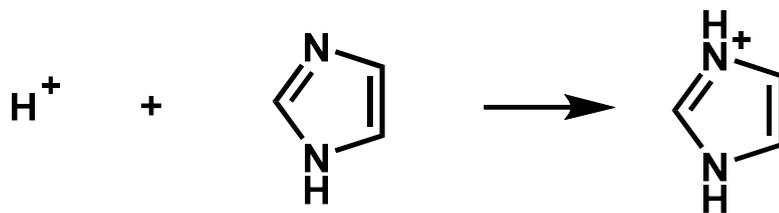
1



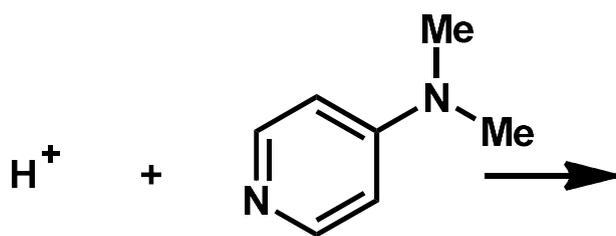
2



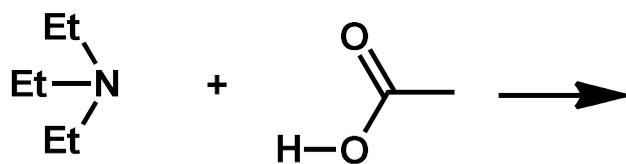
3

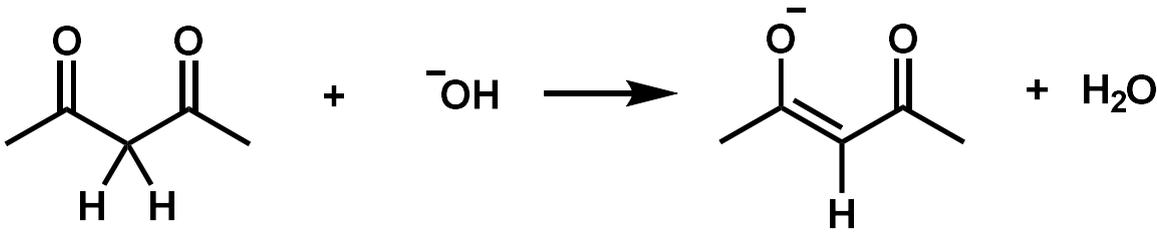
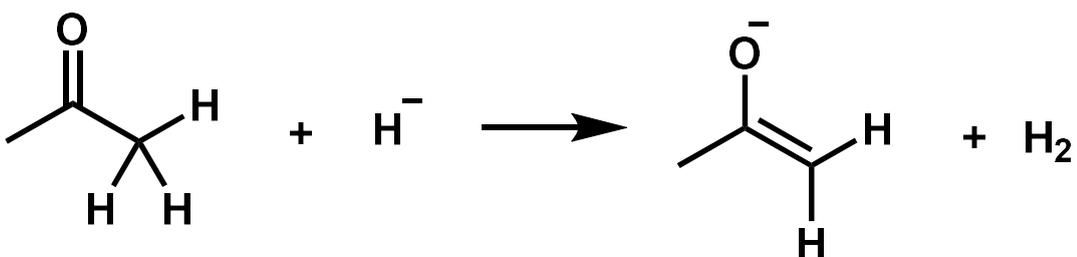
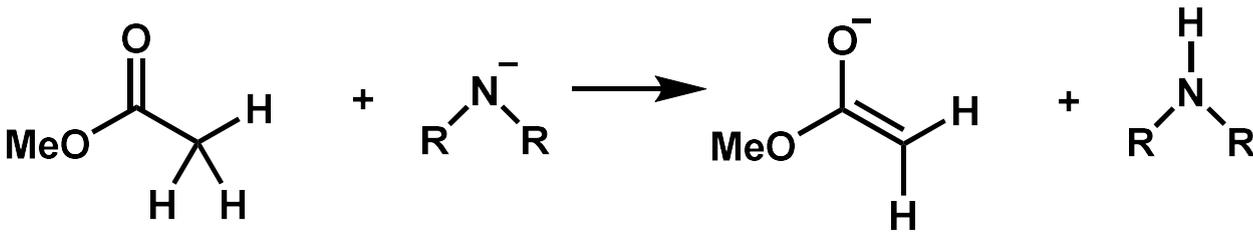
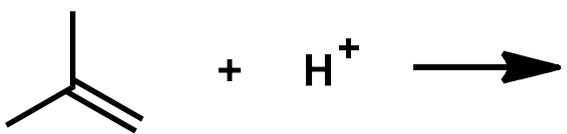


4



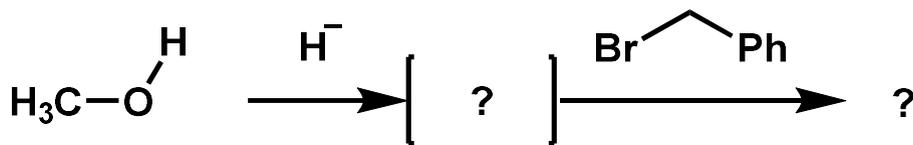
5



6	$\text{H}^- + \text{H}-\text{O}-\text{Et} \longrightarrow$
7	 $\text{CH}_3\text{C}(=\text{O})\text{CH}_3 + \text{OH}^- \longrightarrow \text{CH}_2=\text{C}(\text{O}^-)\text{CH}_3 + \text{H}_2\text{O}$
8	 $\text{CH}_3\text{CHO} + \text{H}^- \longrightarrow \text{CH}_2=\text{C}(\text{O}^-)\text{H} + \text{H}_2$
9	 $\text{HCOOCH}_3 + \text{R}_2\text{N}^- \longrightarrow \text{CH}=\text{C}(\text{O}^-)\text{OCH}_3 + \text{R}_2\text{NH}$
10	 $\text{CH}_2=\text{C}(\text{CH}_3)_2 + \text{H}^+ \longrightarrow$

11	$ \begin{array}{c} \text{H}_3\text{C} \\ \\ \text{H}_3\text{C}-\text{N} \\ \\ \text{H}_3\text{C} \end{array} + \text{H}_3\text{C}-\text{I} \longrightarrow $
12	$ \text{H}_3\text{C}-\text{O}^- + \begin{array}{c} \text{Br} \\ \\ \text{---} \\ \\ \text{Ph} \end{array} \longrightarrow $
13	$ \begin{array}{c} \text{O}^- \\ \\ \text{---} \\ \\ \text{---} \end{array} + \begin{array}{c} \text{Br} \\ \\ \text{---} \\ \\ \text{Ph} \end{array} \longrightarrow \begin{array}{c} \text{O} \\ \\ \text{---} \\ \text{---} \\ \\ \text{Ph} \end{array} $
14	$ \text{CH}_3^- + \begin{array}{c} \text{O} \\ \\ \text{H}_3\text{C}-\text{C}-\text{CH}_3 \end{array} \longrightarrow \begin{array}{c} \text{O}^- \\ \\ \text{H}_3\text{C}-\text{C}-\text{CH}_3 \\ \\ \text{CH}_3 \end{array} $
15	$ \begin{array}{c} \text{O} \\ \\ \text{---} \\ \\ \text{---} \\ \\ \text{---} \end{array} \text{MeO} \longrightarrow \begin{array}{c} \text{O} \\ \\ \text{---} \\ \text{---} \\ \\ \text{---} \\ \\ \text{---} \end{array} \text{MeO} $
16	$ \begin{array}{c} \text{O}^- \\ \\ \text{---} \\ \\ \text{---} \end{array} + \begin{array}{c} \text{O} \\ \\ \text{---} \\ \\ \text{---} \end{array} \longrightarrow \begin{array}{c} \text{O} \\ \\ \text{---} \\ \text{---} \\ \\ \text{---} \\ \\ \text{---} \\ \\ \text{O}^- \end{array} $

生成物を記せ。また、電子の流れを表す矢印を用いて反応機構を示せ。



まとめ

電子の流れを表す矢印は……

電子豊富から電子不足へ

たのび、いじり



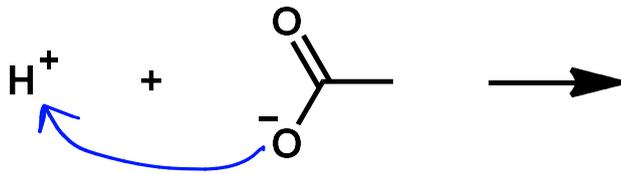
いじり

電子の流れを表す矢印

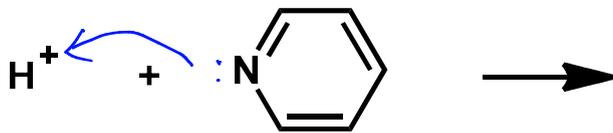
例：



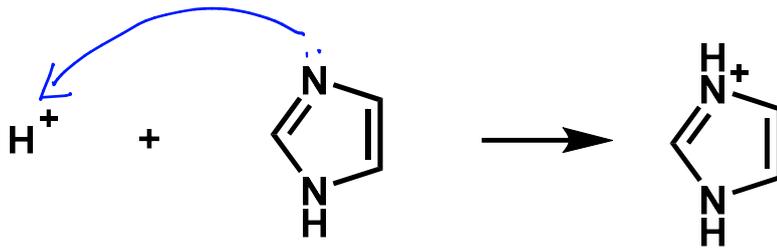
1



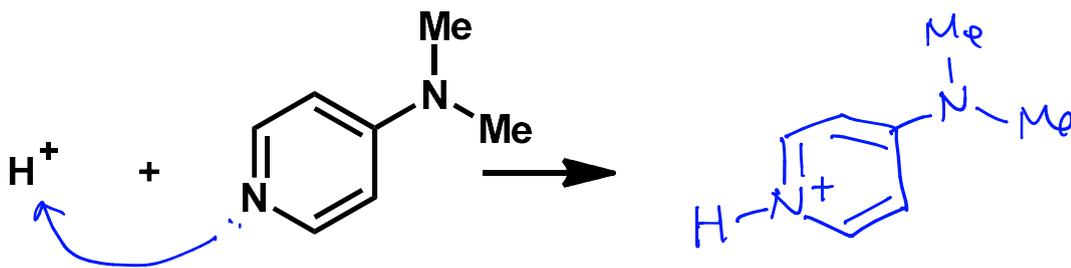
2



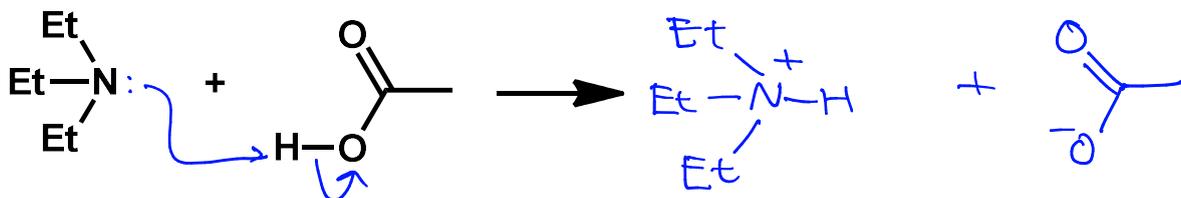
3

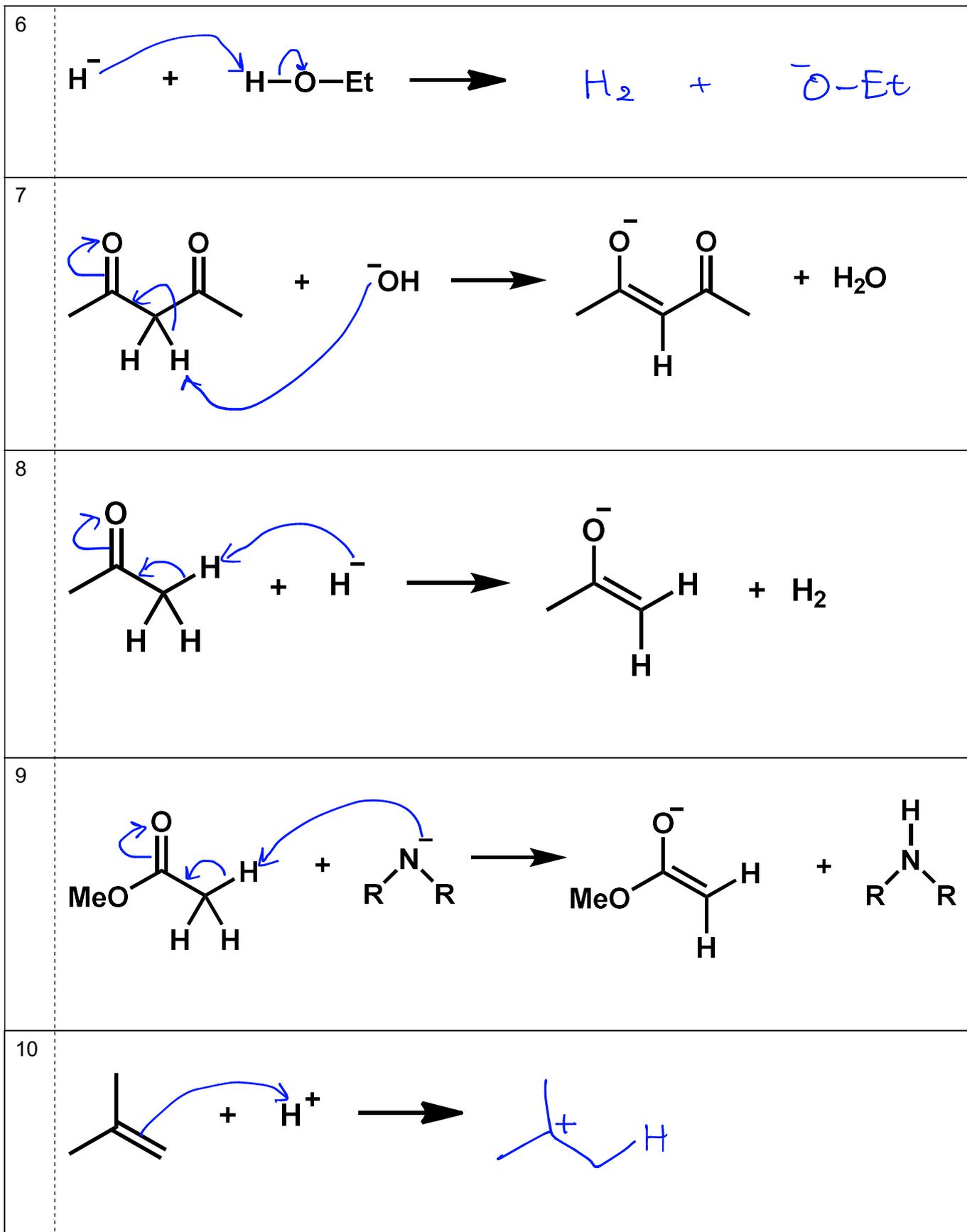


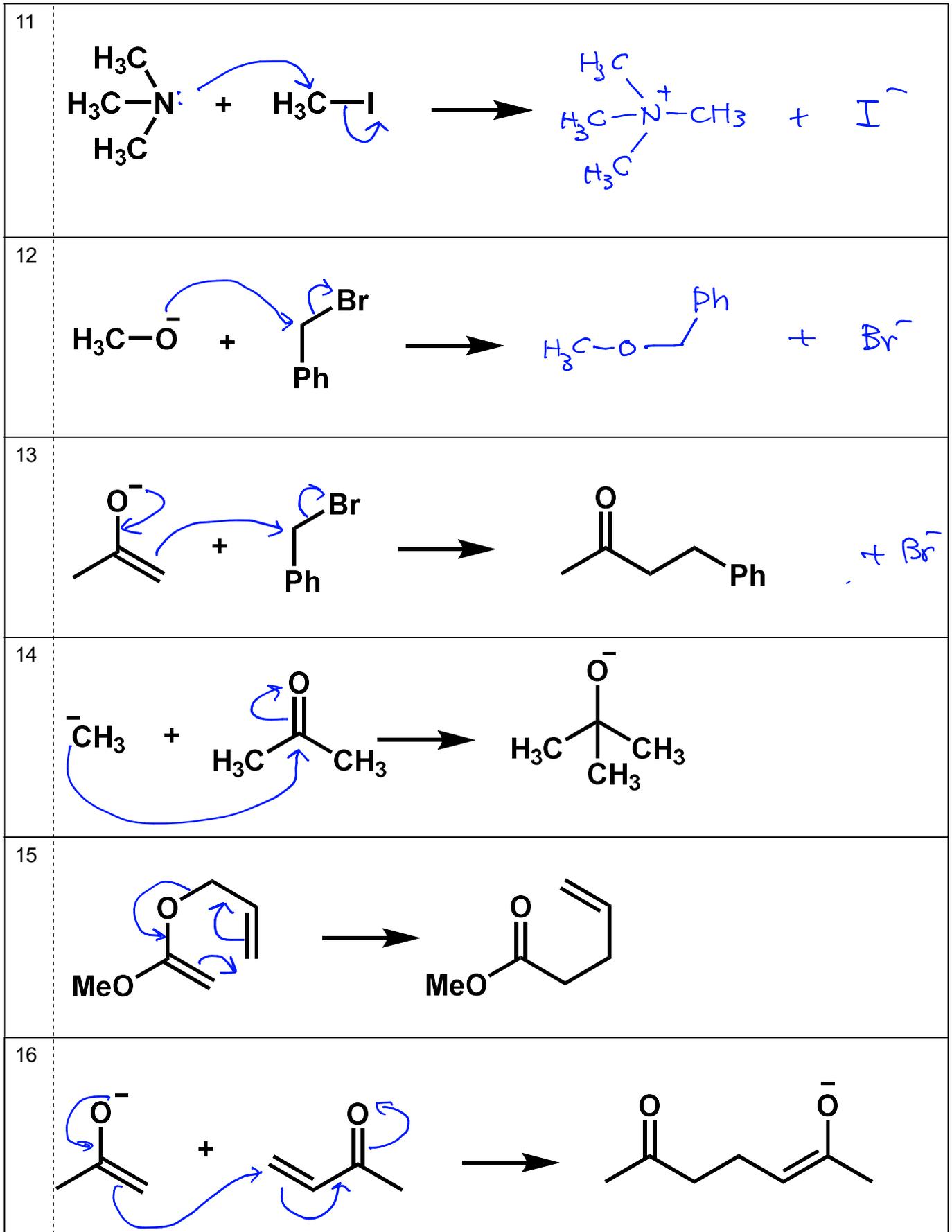
4



5







有機化学演習 確認テスト

生成物を記せ。また、電子の流れを表す矢印を用いて反応機構を示せ。

