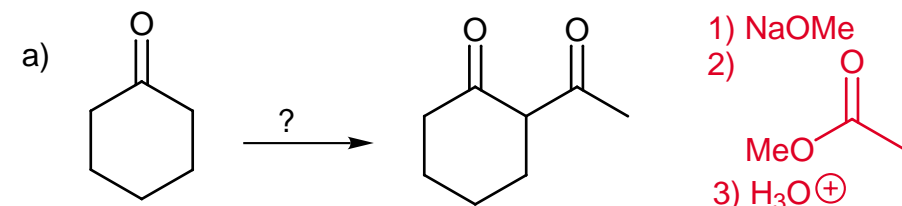
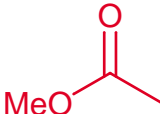
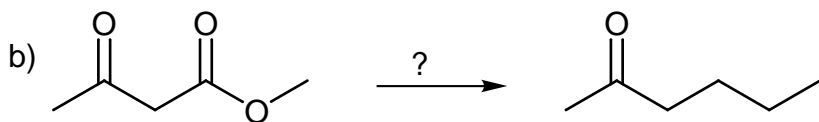



**Chem 212**  
**Condensation Reactions 3 ANSWERS**

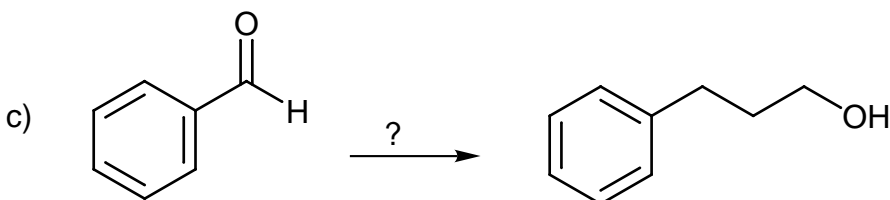
Suggest a synthesis of the following products from the starting materials given, more than one step might be needed. There are usually many possible correct answers.



- 1) NaOMe
- 2) 
- 3)  $\text{H}_3\text{O}^+$




- 1) NaOMe
- 2) 
- 3) NaOH
- 4)  $\text{H}^+$ , heat



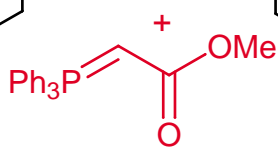
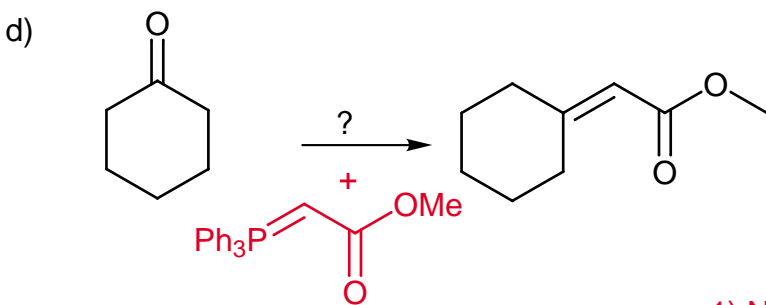
- 1)  $\text{CH}_3\text{CHO}$ , NaOMe, warm
- 2)  $\text{NH}_2\text{NH}_2$ ,  $-\text{OH}$ , heat
- 3)  $\text{BH}_3$
- 4)  $\text{H}_2\text{O}_2$ ,  $-\text{OH}$ ,  $\text{H}_2\text{O}$

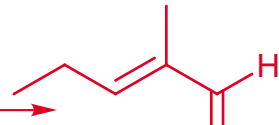
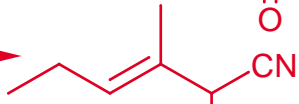

OR

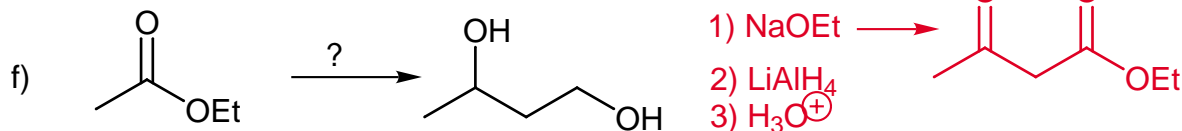
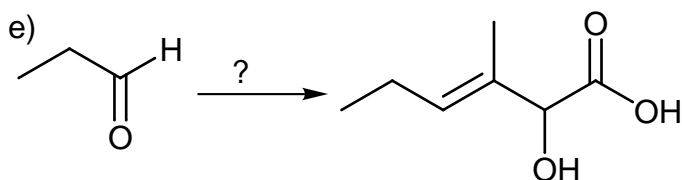
- 1)  $\text{NaBH}_4$ , MeOH
- 2)  $\text{PBr}_3$
- 3) Mg
- 4) 
- 5)  $\text{H}_3\text{O}^+$

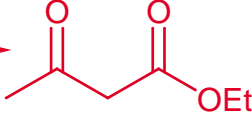
OR

- 1)  MgBr
- 2)  $\text{H}_3\text{O}^+$
- 3) PCC
- 4)  $\text{NH}_2\text{NH}_2$ , NaOH, heat
- 5)  $\text{BH}_3$
- 6)  $\text{H}_2\text{O}_2$ ,  $-\text{OH}$ ,  $\text{H}_2\text{O}$



- 1) NaOH, EtOH, warm  $\rightarrow$  
- 2) HCN,  $\text{H}_2\text{O}$   $\rightarrow$  
- 3)  $\text{H}_3\text{O}^+$ , heat  $\rightarrow$  



- 1) NaOEt  $\rightarrow$  
- 2)  $\text{LiAlH}_4$
- 3)  $\text{H}_3\text{O}^+$