

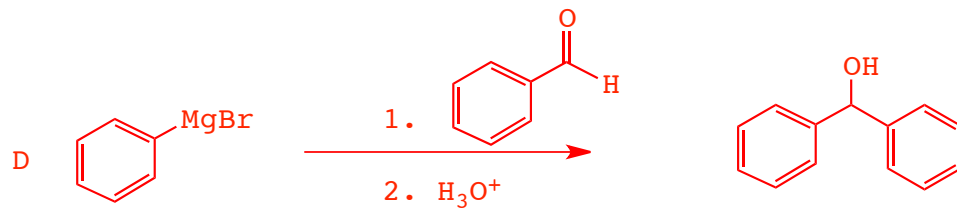
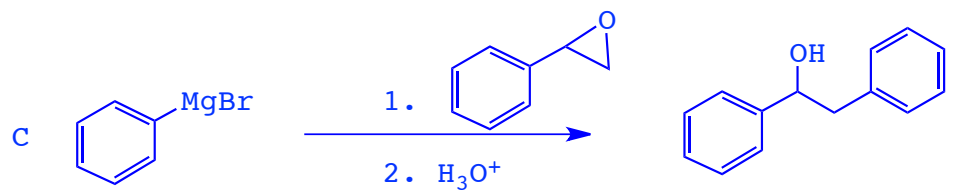
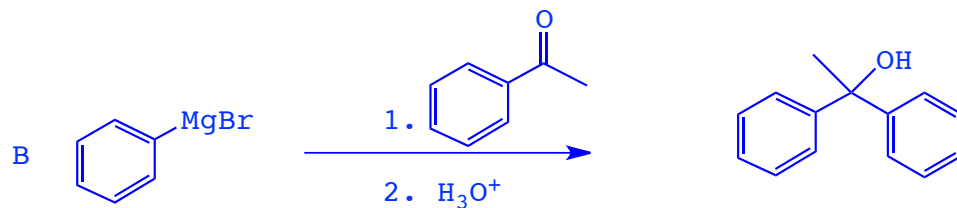
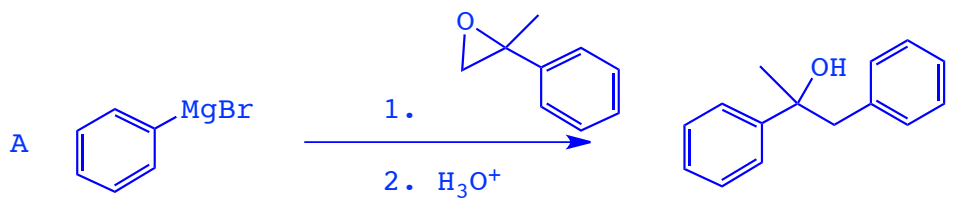
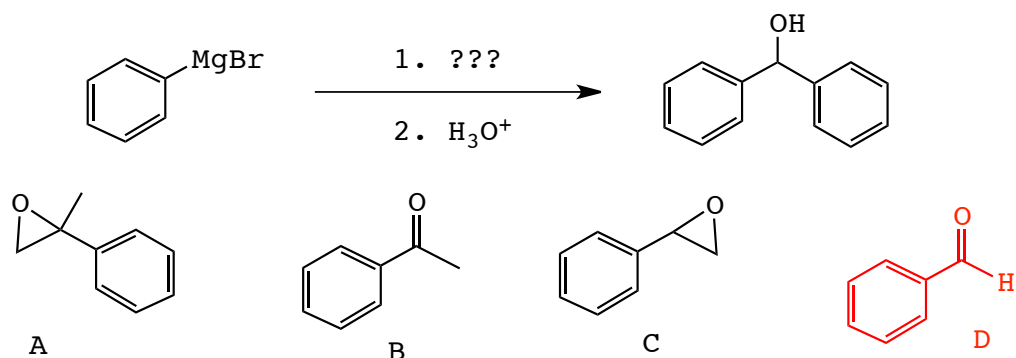
CHM 234, Spring 2018
QUIZ #6 ANSWER KEY

(hit the RETURN Button to return to the Main Quiz Page)

QUESTION 1

Grignardsa

Give the structure that you would use with the provided Grignard reagent to give the provided product



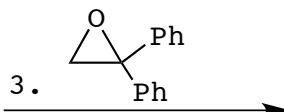
QUESTION 2

MC29g

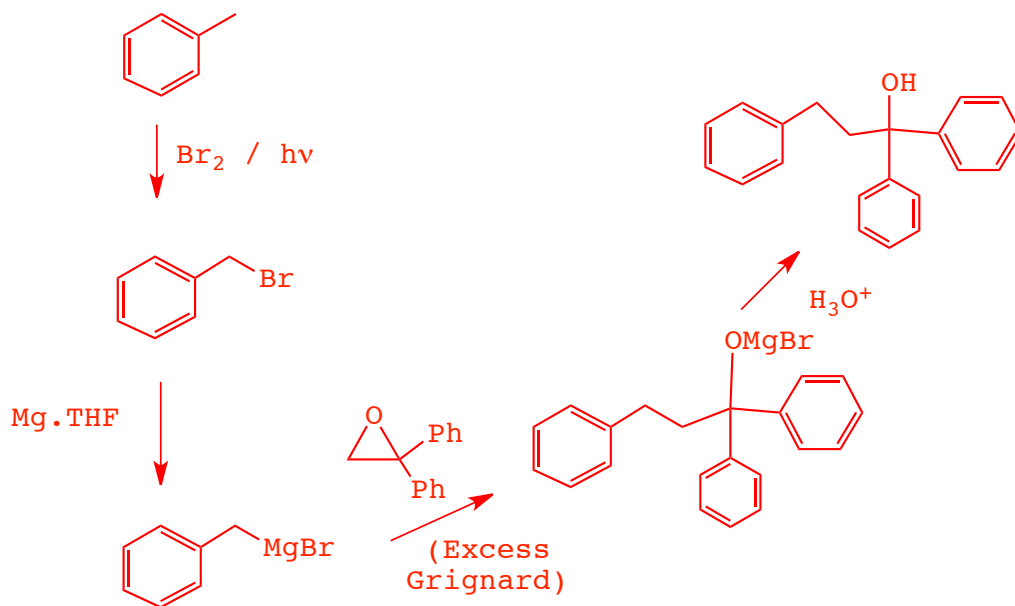
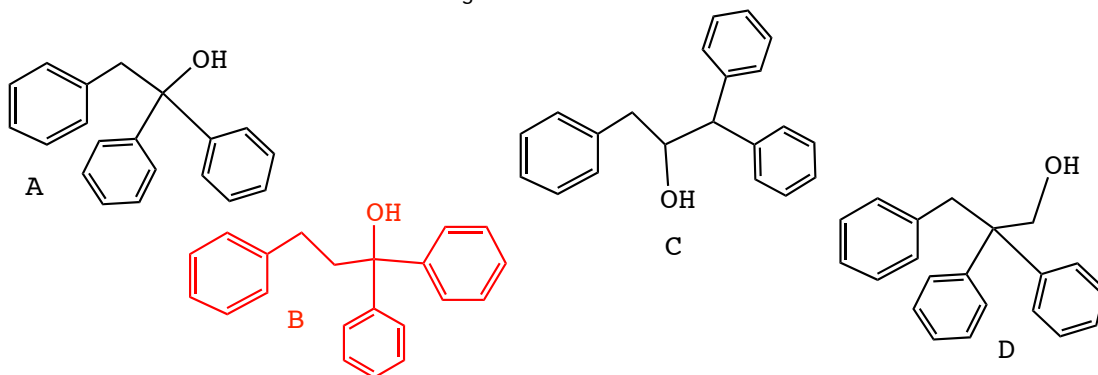
Give the product of the following reaction sequence with the starting material shown

1. $\text{Br}_2 / h\nu$

2. $\text{Mg} \cdot \text{THF}$



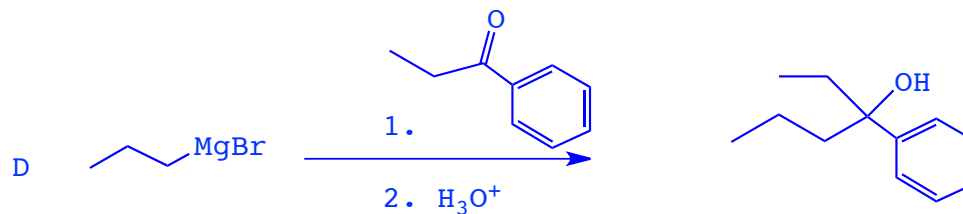
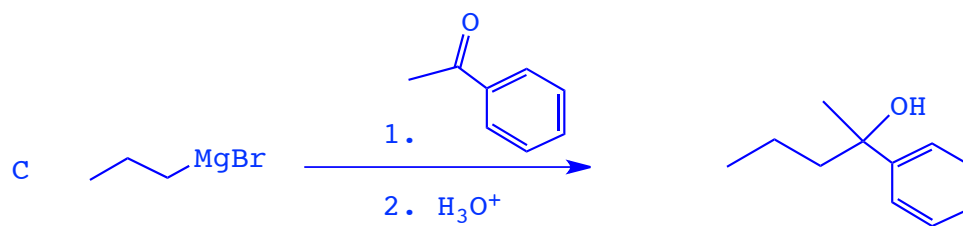
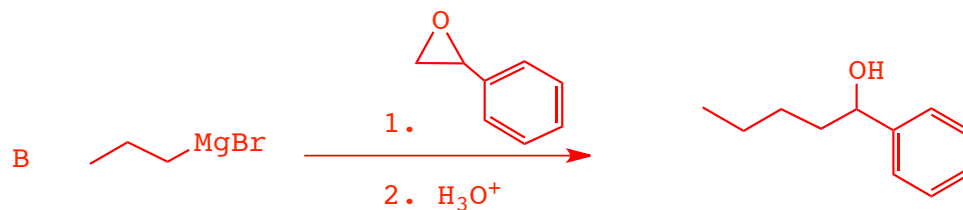
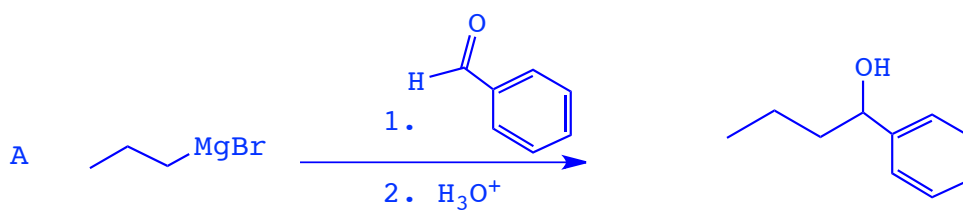
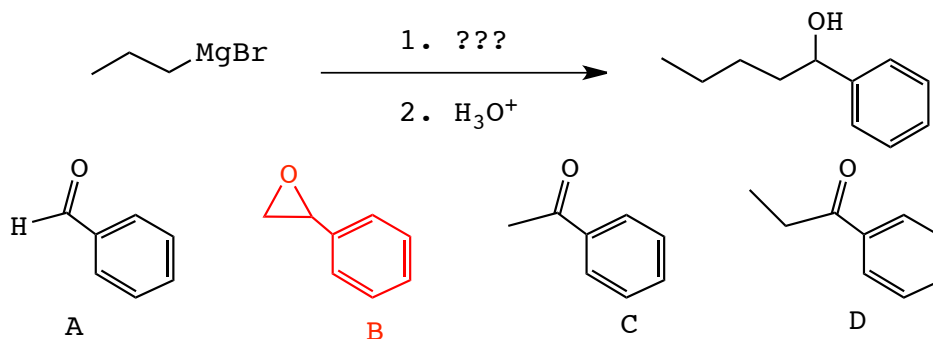
4. H_3O^+



QUESTION 3

Grignardsb

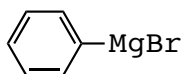
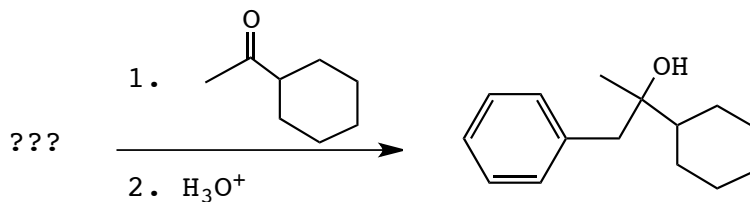
Give the structure that you would use with the provided Grignard reagent to give the provided product



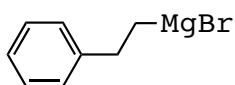
QUESTION 4

Grignardsc

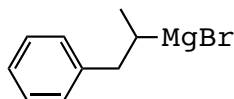
Give the Grignard reagent you would use to complete the following reaction



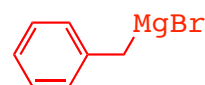
A



B

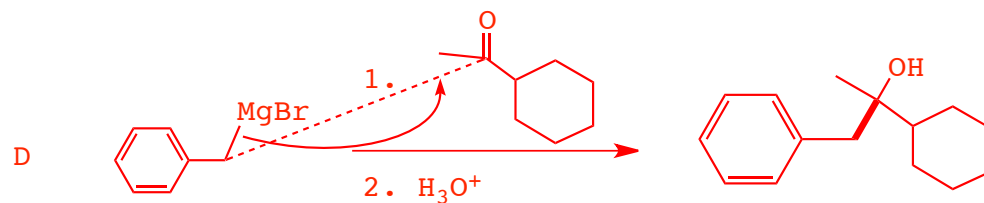
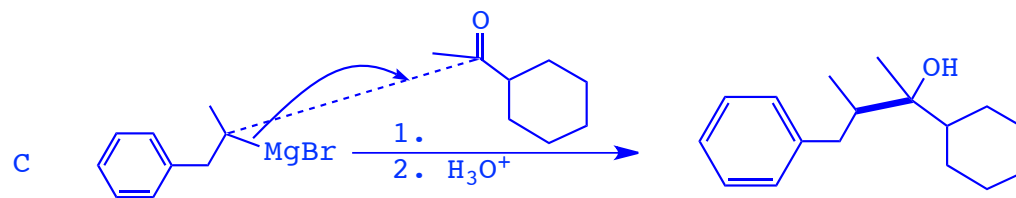
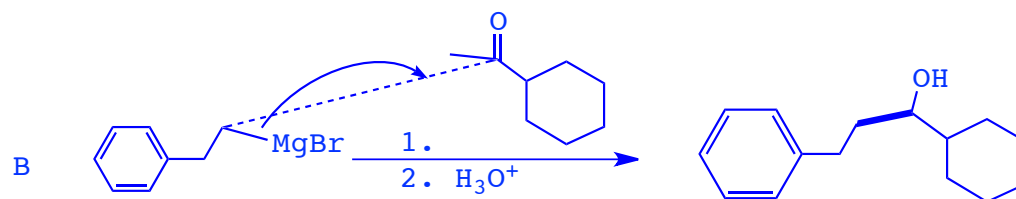
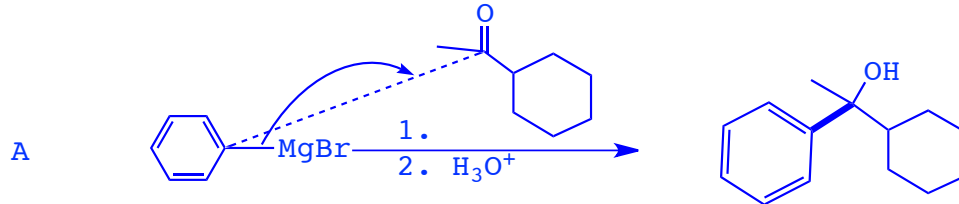


C



D

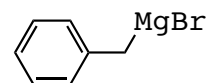
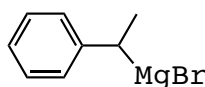
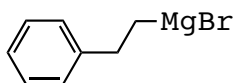
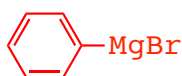
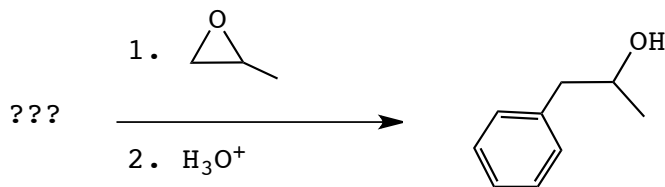
new C-C bonds are indicated in **BOLD**



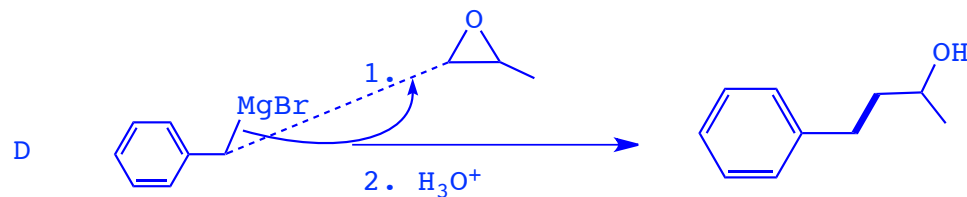
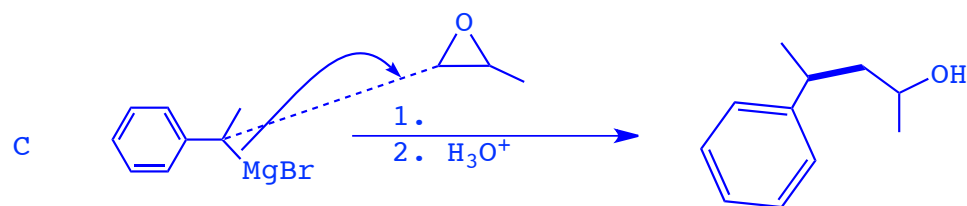
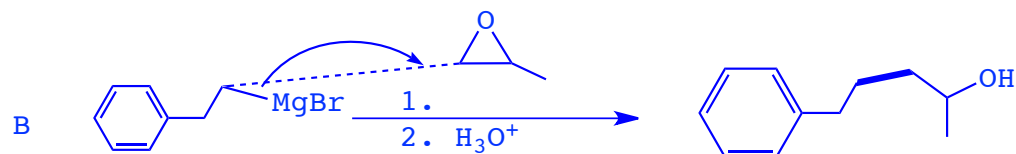
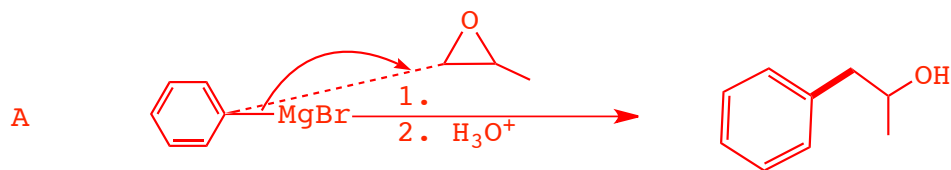
QUESTION 5

Grignards

Give the Grignard reagent you would use to complete the following reaction



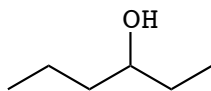
new C-C bonds are indicated in **BOLD**



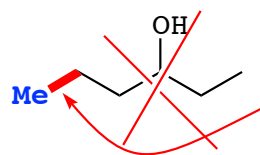
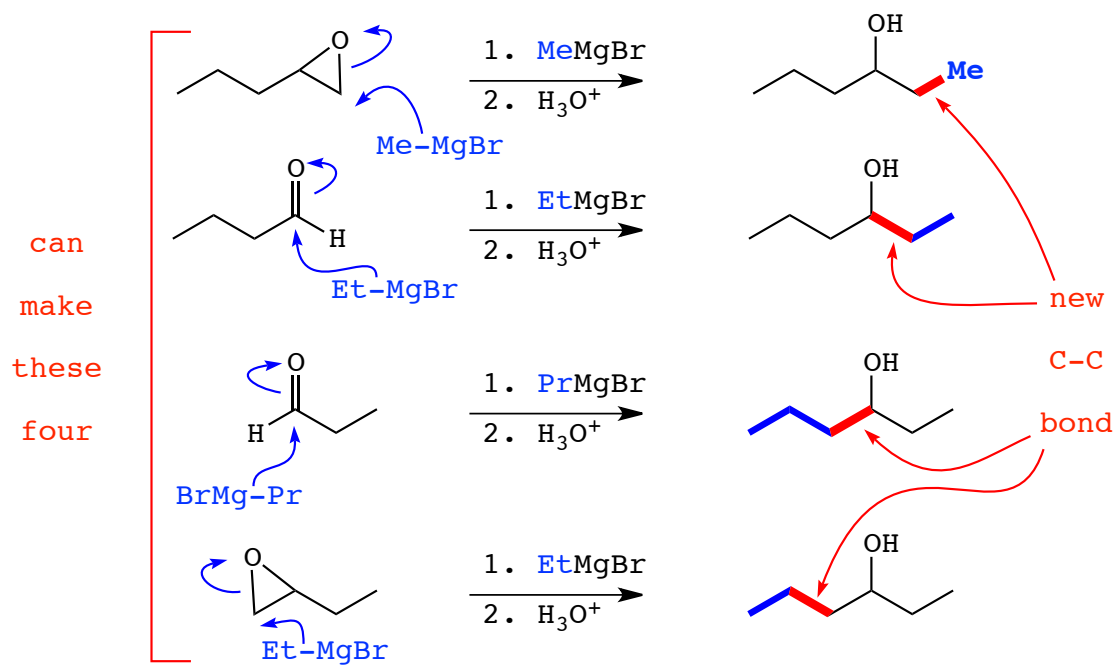
QUESTION 6

Grignardse

How many of the carbon-carbon bonds in the following structure could have been made in a Grignard reaction with either a carbonyl compound (C=O) or an epoxide?



- A 2 bonds
- B 3 bonds
- C 4 bonds
- D 5 bonds

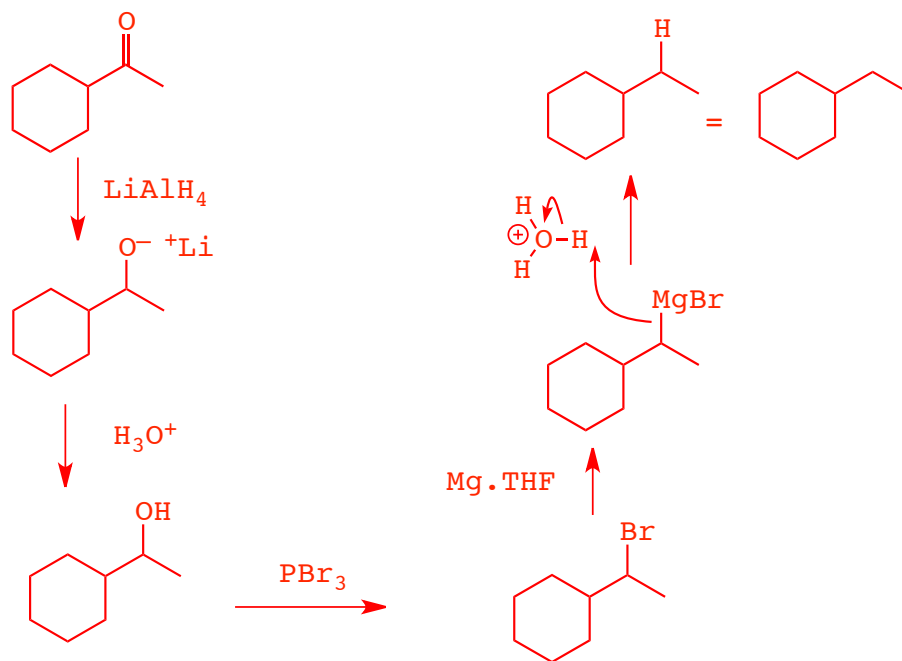
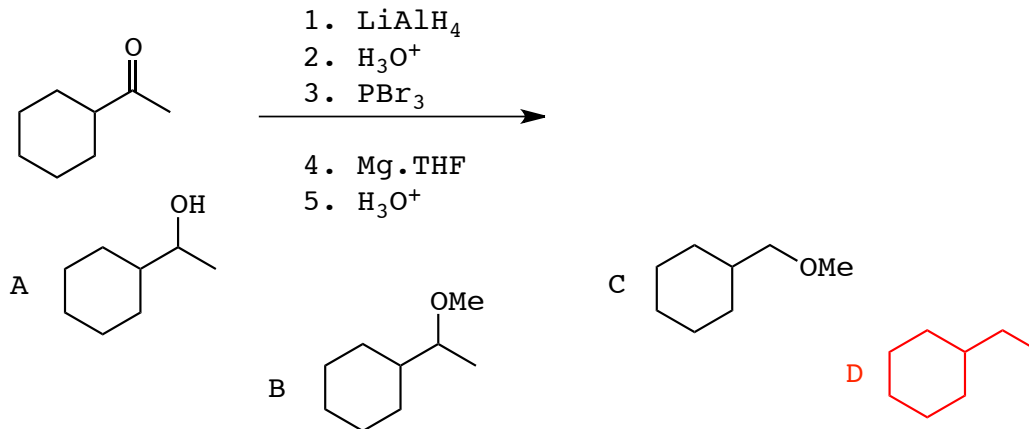


can't make this C-C bond
in a Grignard reaction

QUESTION 7

MC29c

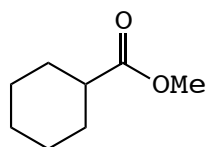
Give the product of the following reaction sequence with the starting material shown, (hint, be careful with step #5, remember that Grignards are strong Bronsted bases!)



QUESTION 8

MC29b

Give the product of the following reaction sequence with the starting material shown (hint, be careful at step #3, remember that a Grignard reagent will also be a strong Bronsted base!)



1. Excess LiAlH_4
2. H_3O^+
3. Excess MeMgBr
4. H_3O^+
5. $\text{Na}_2\text{Cr}_2\text{O}_7/\text{H}_2\text{SO}_4/\text{H}_2\text{O}$

