

LeAP: Synthesis

- Due Nov 14, 2024 at 11:59pm
- Points 5
- Questions 6
- Available Nov 3, 2024 at 12am - Nov 18, 2024 at 11:59pm
- Time Limit None
- Allowed Attempts 2

Instructions

Lecture Application Practices (LeAPs) serve as initial opportunities for students to apply the information they've gathered from the pre-lecture videos and in-person lectures/lecture videos.

Students are strongly encouraged to complete LeAPs on the same day that the corresponding topic is completed in class. However, to provide consistent due dates, sets of LeAPs will be due on Thursdays at 11:59 PM - Chicago time. See the Weekly Schedules or Course Calendar for specific due dates for each activity.

Each LeAP is worth 5 points. Credit will be awarded based on accuracy. There is no time limit. Students will receive two attempts for each assignment and the highest score will be recorded in the gradebook. LeAPs may consist of multiple-choice, calculation, ranking, choose all that apply, and fill in the blank type questions.

This quiz was locked Nov 18, 2024 at 11:59pm.

Attempt History

	Attempt	Time	Score
LATEST	<u>Attempt 1</u>	1,206 minutes	5 out of 5

⚠ Correct answers are hidden.

Score for this attempt: 5 out of 5
Submitted Nov 14, 2024 at 10am
This attempt took 1,206 minutes.



Question 1
1 / 1 pts

Consider the 2-step synthesis problem shown below to answer questions 1-5.



Number the carbons in your starting material. Identify the corresponding carbons in your product and number them accordingly. A new C-C bond was made. Which arrow points to the new bond that was made?

- ☐ A
- ☒ B
- ☐ C
- ☐ D



Question 2

0.5 / 0.5 pts

What is the name of the functional group found in the starting material?

- ☐ aldehyde
- ☐ bromide
- ☐ alcohol
- ☒ halohydrin



Question 3

0.5 / 0.5 pts

What is the name of the functional group found in the product?

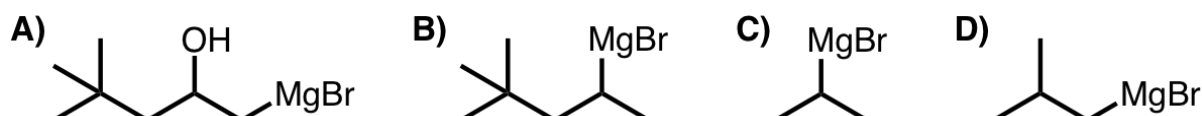
- ☒ secondary alcohol
- ☐ aldehyde
- ☐ tertiary alcohol
- ☐ carboxylic acid



Question 4

1 / 1 pts

Think retrosynthetically. Consider the bonding patterns and connectivity in your product and the new piece that was added. Which organometallic reagent was used to form the new C-C bond?



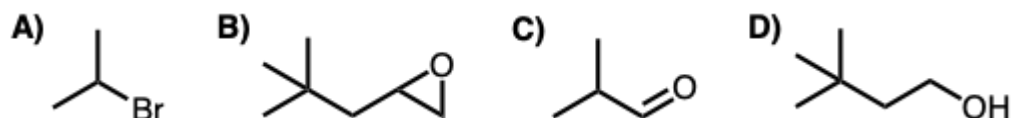
- ☐ A
- ☐ B
- ☒ C
- ☐ D



Question 5

1 / 1 pts

Think retrosynthetically. Consider the bonding patterns and connectivity in your product. Which electrophile was paired with the organometallic reagent that was used to form the new C-C bond?



- ☐ A
- ☒ B
- ☐ C
- ☐ D



Question 6

1 / 1 pts

Based on your previous retrosynthetic analysis, you should determine the structure of the Intermediate Product and whether you need to convert your starting material into the organometallic nucleophile or the electrophile.

Compare the structure of your starting material to the structure of the Intermediate Product. What is **Reagent 1**?

- ☒ NaH
- ☐ CIMs, pyridine
- ☐ CrO₃, H₂O, H₂SO₄
- ☐ H₂SO₄, heat

Quiz Score: 5 out of 5