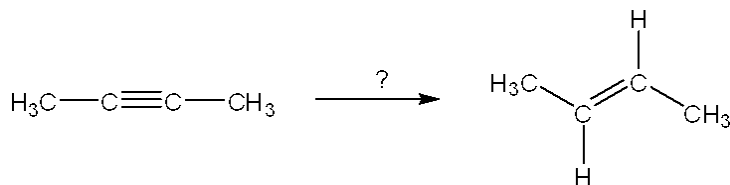


Exam 3

Multiple Choice

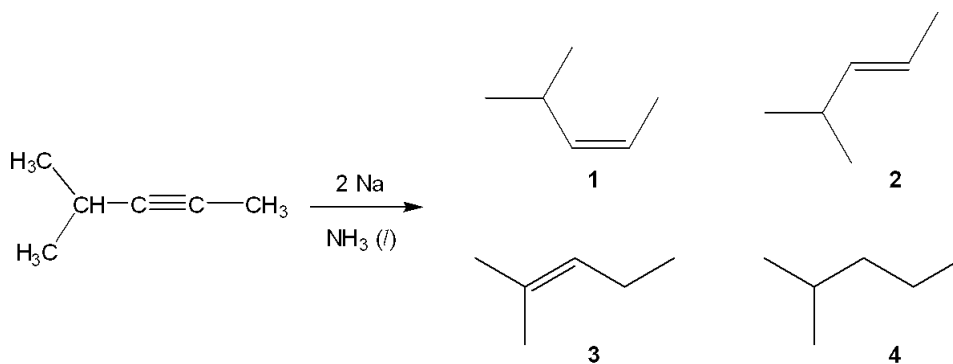
Identify the choice that best completes the statement or answers the question.

- ___ 1. What is the best choice of reagent(s) to perform the following transformation?



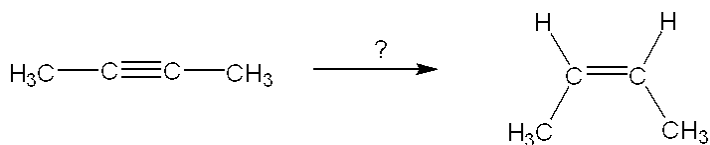
- BH_3 ; followed by H_2O_2 , NaOH
- H_2/Pt
- Na/NH_3
- $\text{H}_2/\text{Lindlar catalyst}$

- ___ 2. What is the major organic product obtained from the following reaction?



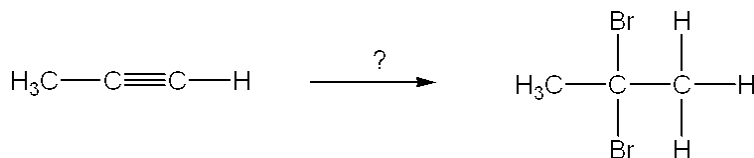
- 1**
- 2**
- 3**
- 4**

- ___ 3. What is the best choice of reagent(s) to perform the following transformation?



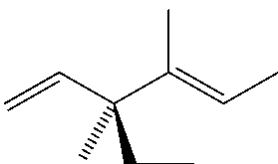
- $\text{H}_2/\text{Lindlar catalyst}$
- H_2/Pt
- BH_3 ; followed by H_2O_2 , NaOH
- Na/NH_3

___ 4. What is the best choice of reagent(s) to perform the following transformation?



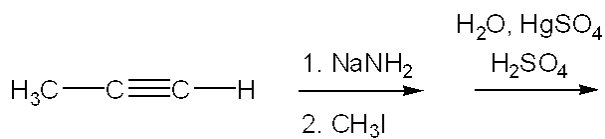
- a. 2 moles of Br_2
- b. 2 moles of HBr
- c. 1 mole of Br_2
- d. 1 mole of HBr

___ 5. What is the systematic IUPAC name of the following compound?



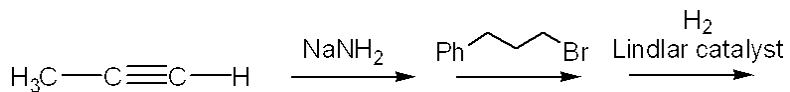
- a. (3*S*,4*Z*)-3-ethyl-3,4-dimethyl-1,4-hexadiene
- b. (3*S*,4*E*)-3-ethyl-3,4-dimethyl-1,4-hexadiene
- c. (3*R*,4*E*)-3-ethyl-3,4-dimethyl-1,4-hexadiene
- d. (3*R*,4*Z*)-3-ethyl-3,4-dimethyl-1,4-hexadiene

___ 6. What is the major organic product obtained from the following series of reactions?



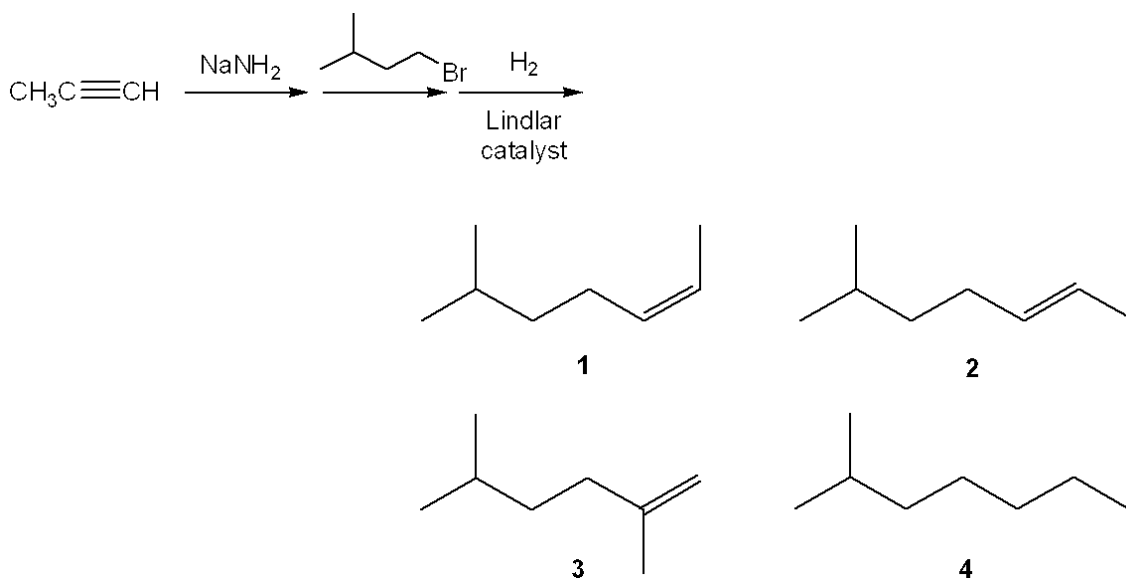
- a. 1-propanol, $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$
- b. butanone, $\text{CH}_3\text{COCH}_2\text{CH}_3$
- c. propanal, $\text{CH}_3\text{CH}_2\text{CHO}$
- d. butanal, $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO}$

___ 7. What is the major organic product obtained from the following series of reactions?



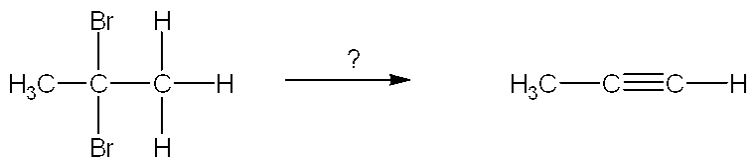
- a. 6-phenyl-1-hexene
- b. (*E*)-6-methyl-3-heptene
- c. (*Z*)-6-phenyl-2-hexene
- d. (*E*)-5-phenyl-2-pentene

___ 8. What is the major organic product obtained from the following series of reactions?



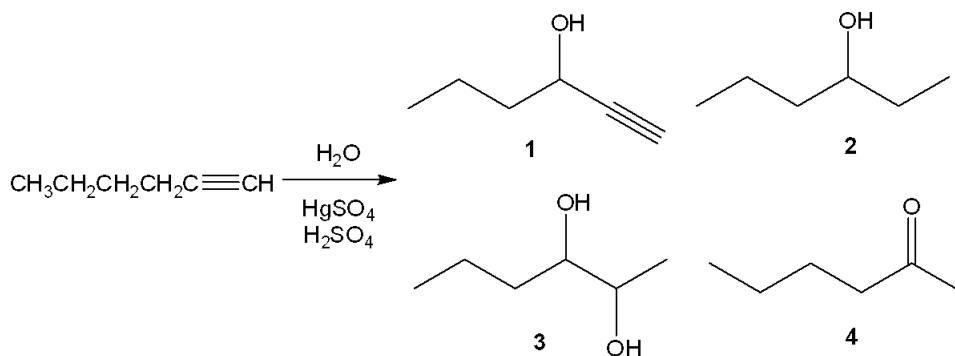
- 1
- 2
- 3
- 4

___ 9. What is the best choice of reagent(s) to perform the following transformation?



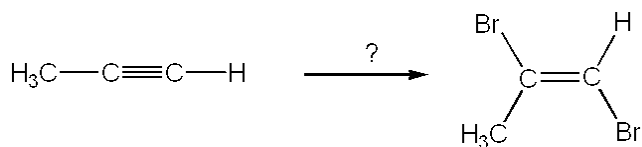
- $\text{H}_2\text{O}; \text{H}_2\text{SO}_4$
- Zn
- $\text{KMnO}_4, \text{NaOH}, \text{H}_2\text{O}$
1. 3 moles of NaNH_2 ; 2. H_3O^+

___ 10. What is the major organic product obtained from the following reaction?



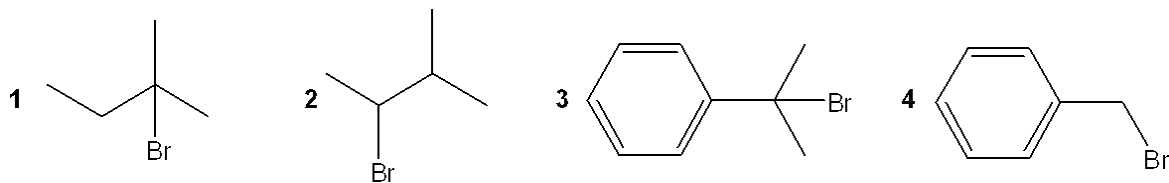
- a. **1**
- b. **2**
- c. **3**
- d. **4**

___ 11. What is the best choice of reagent(s) to perform the following transformation?



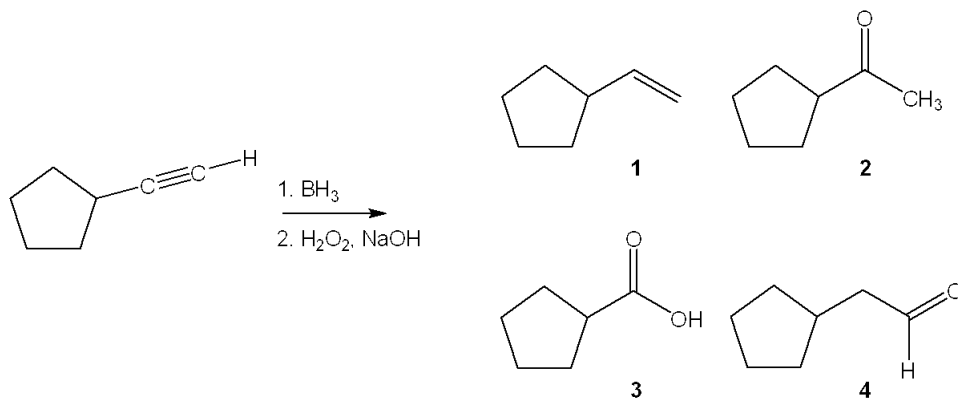
- a. 1 mole of Br_2
- b. 2 moles of Br_2
- c. 1 mole of HBr
- d. 2 moles of HBr

___ 12. Which of the following is most likely to undergo rearrangement during reaction with methanol?



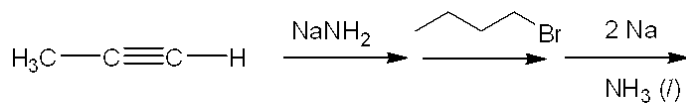
- a. **1**
- b. **2**
- c. **3**
- d. **4**

___ 13. What is the major organic product obtained from the following reaction?



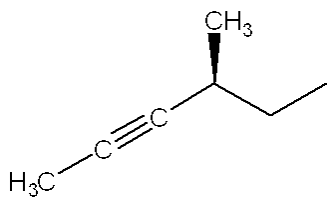
- a. **1**
- b. **2**
- c. **3**
- d. **4**

___ 14. What is the major organic product obtained from the following series of reactions?



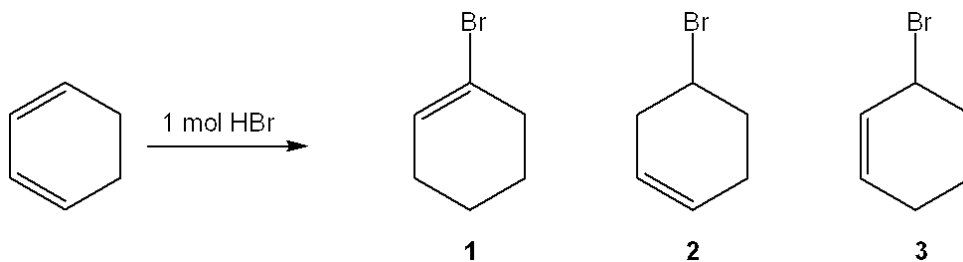
- a. (*E*)-2-heptene
- b. heptane
- c. (*Z*)-2-heptene
- d. 1-heptene

___ 15. What is the IUPAC name of the following compound?



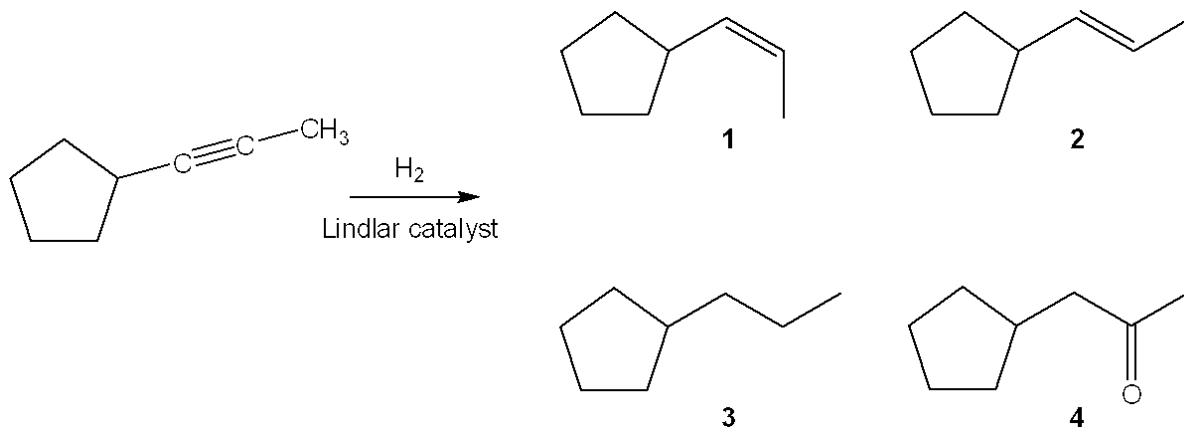
- a. (*R*)-4-methyl-2-hexyne
- b. (*R*)-3-methyl-4-hexyne
- c. (*S*)-3-methyl-4-hexyne
- d. (*S*)-4-methyl-2-hexyne

___ 16. What is (are) the major organic product(s) formed in the following reaction?



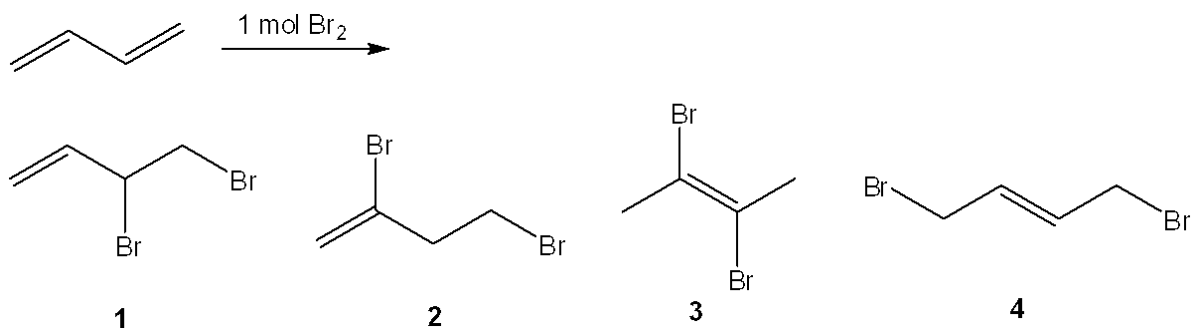
- a. only **1**
- b. only **2**
- c. only **3**
- d. **1, 2 and 3**

___ 17. What is the major organic product obtained from the following reaction?



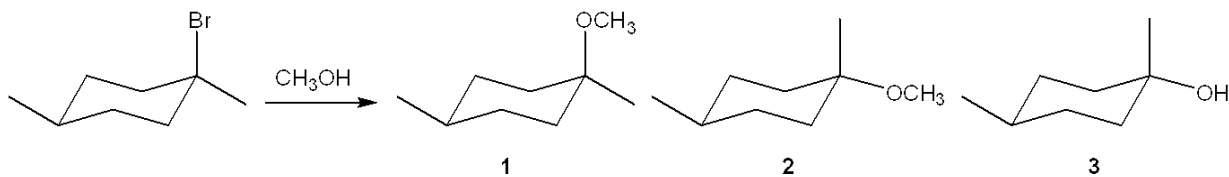
- a. **1**
- b. **2**
- c. **3**
- d. **4**

___ 18. What is (are) the major organic product(s) formed in the following reaction?



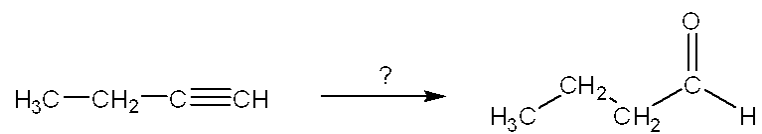
- a. only **1**
- b. only **1** and **3**
- c. only **2** and **4**
- d. only **1** and **4**

___ 19. What is(are) the major organic product(s) obtained from the following substitution reaction?



- a. only **1**
- b. only **2**
- c. only **3**
- d. a mixture of **1** and **2**

____ 20. What is the best choice of reagent(s) to perform the following transformation?



- a. Na/NH₃
- b. BH₃; followed by H₂O₂, NaOH
- c. H₂/Lindlar catalyst

Exam 3
Answer Section

MULTIPLE CHOICE

1. ANS: C PTS: 5
2. ANS: B PTS: 5
3. ANS: A PTS: 5
4. ANS: B PTS: 5
5. ANS: B PTS: 5
6. ANS: B PTS: 5
7. ANS: C PTS: 5
8. ANS: A PTS: 5
9. ANS: D PTS: 5
10. ANS: D PTS: 5
11. ANS: A PTS: 5
12. ANS: B PTS: 5
13. ANS: D PTS: 5
14. ANS: A PTS: 5
15. ANS: D PTS: 5
16. ANS: C PTS: 5
17. ANS: A PTS: 5
18. ANS: D PTS: 5
19. ANS: D PTS: 5
20. ANS: B (The correct answer is B). The bubble score card was noted as D. Everyone received 5 PTS on this question #20.