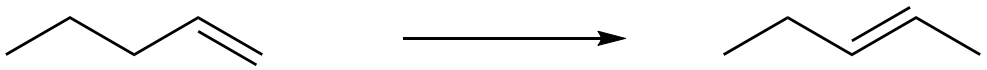
CHM 3150 Organic Chem. II, Dr. Starkey, Cal Poly Pomona
Ch. 11 Synthesis #2 (& Review Ch. 7-10) – Practice Problems

For clicker question voting, go to:
https://pollev.com/lauriestarke263
LAURIESTARKE263 to 37607

Provide the reagents necessary to achieve each transformation. Draw the intermediate structure(s).

1



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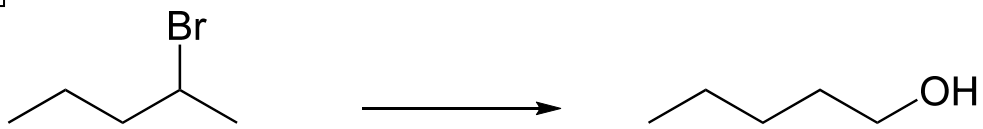

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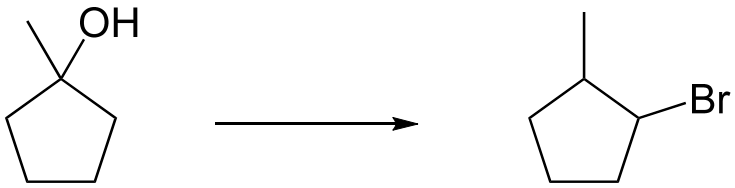

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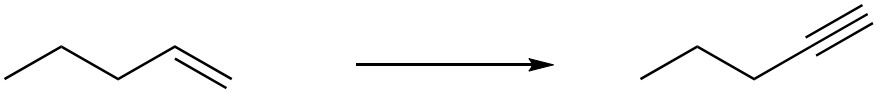

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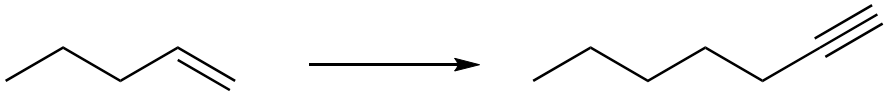

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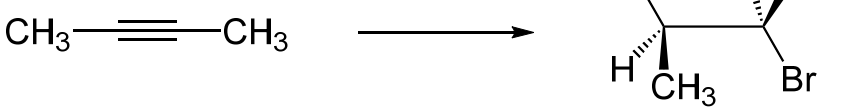
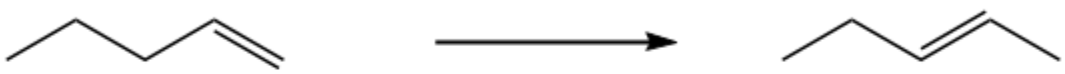


8

1

Which reagents would be best to achieve the following synthesis?



A) 1) HBr, ROOR
2) *t*-BuOK

C) 1) HBr
2) *t*-BuOK

B) 1) HBr, ROOR
2) NaOEt

D) 1) HBr
2) NaOEt

2

A) 1) HBr, ROOR
2) *t*-BuOK

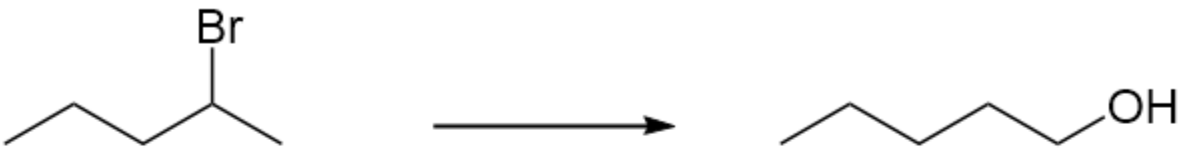
C) 1) HBr
2) *t*-BuOK

B) 1) HBr, ROOR
2) NaOEt

D) 1) HBr
2) NaOEt

Which reagents would be best to achieve the following synthesis?

3



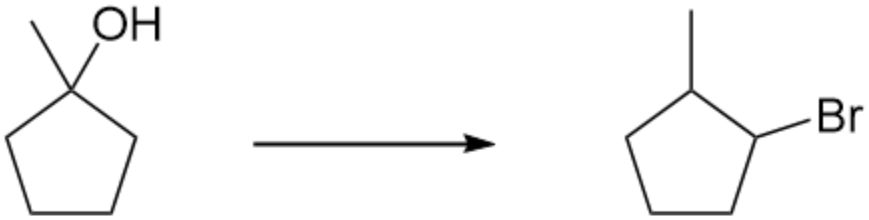
A) 1) *t*-BuOK
2) BH_3-THF
3) H_2O_2, NaOH

C) 1) NaOEt
2) $Hg(OAc)_2$, H_2O
3) $NaBH_4$

B) 1) NaOEt
2) BH_3-THF
3) H_2O_2, NaOH

D) 1) *t*-BuOK
2) $Hg(OAc)_2$, H_2O
3) $NaBH_4$

4



A) 1) TsCl, py
2) *t*-BuOK
3) HBr

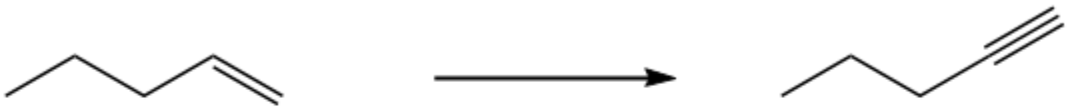
C) 1) TsCl, py
2) *t*-BuOK
3) HBr, ROOR

B) 1) conc. H_2SO_4, heat
2) HBr, ROOR

D) 1) conc. H_2SO_4, heat
2) HBr

5

Which reagents would be best to achieve the following synthesis?



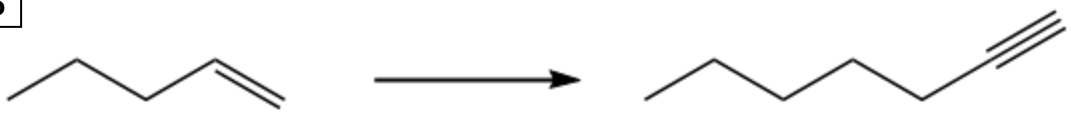
A) 1) HBr
2) HC≡CNa

C) 1) HBr, ROOR
2) HC≡CNa

B) 1) Br_2
2) xs $NaNH_2$
3) H_2O

D) 1) $KMnO_4$
2) xs $NaNH_2$
3) H_2O

6



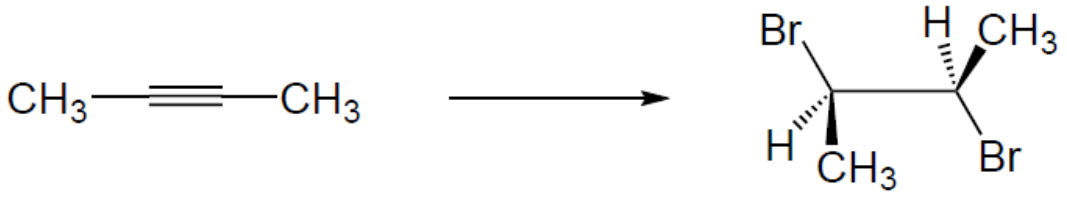
A) 1) HBr
2) HC≡CNa

C) 1) HBr, ROOR
2) HC≡CNa

B) 1) Br_2
2) xs $NaNH_2$
3) H_2O

D) 1) HBr
2) xs $NaNH_2$
3) H_2O

7 Which reagents would be best to achieve the following synthesis?



A) 1) Br_2
2) H_2, Lindlar's catalyst

B) 1) Br_2
2) Na, NH_3

C) 1) H_2, Lindlar's catalyst
2) Br_2

D) 1) Na, NH_3
2) Br_2

E) HBr (excess)

8

A) 1) xs $NaNH_2$
2) H_2O
3) BH_3-THF
4) H_2O_2, NaOH

B) 1) xs $NaNH_2$
2) H_2O
3) $Hg(OAc)_2$, H_2O
4) $NaBH_4$

C) 1) EtONa
2) O_3
3) DMS

D) 1) *t*-BuOK
2) O_3
3) DMS