Dr. Starkey, CHM 3140 Organic Chem. I, Cal Poly Pomona
Chapter 9 Alkyne Reactions, Part 1 – Practice Problems

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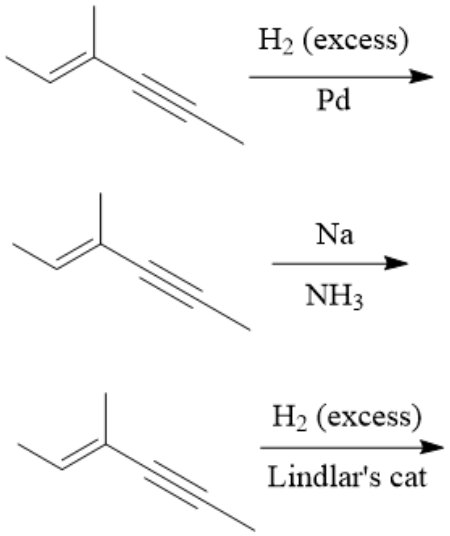
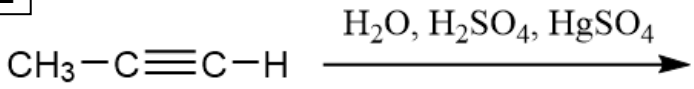
LAURIESTARKE263 to 37607

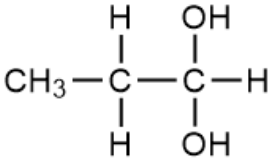
Predict the major products for the following reactions.

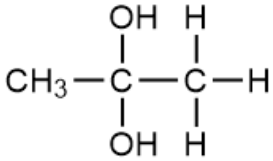
1

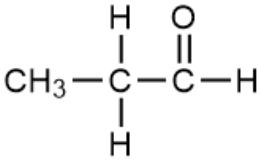


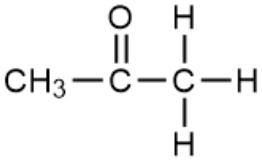
2

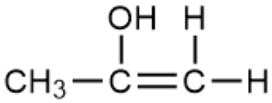


A) 

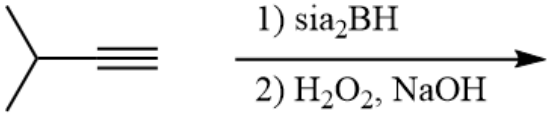
B) 

C) 

D) 

E) 

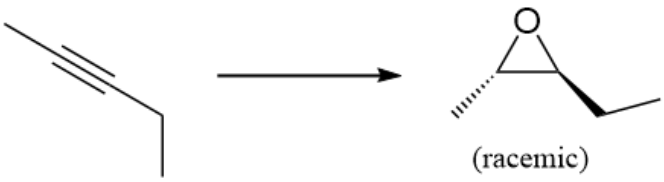
3



4

5

6



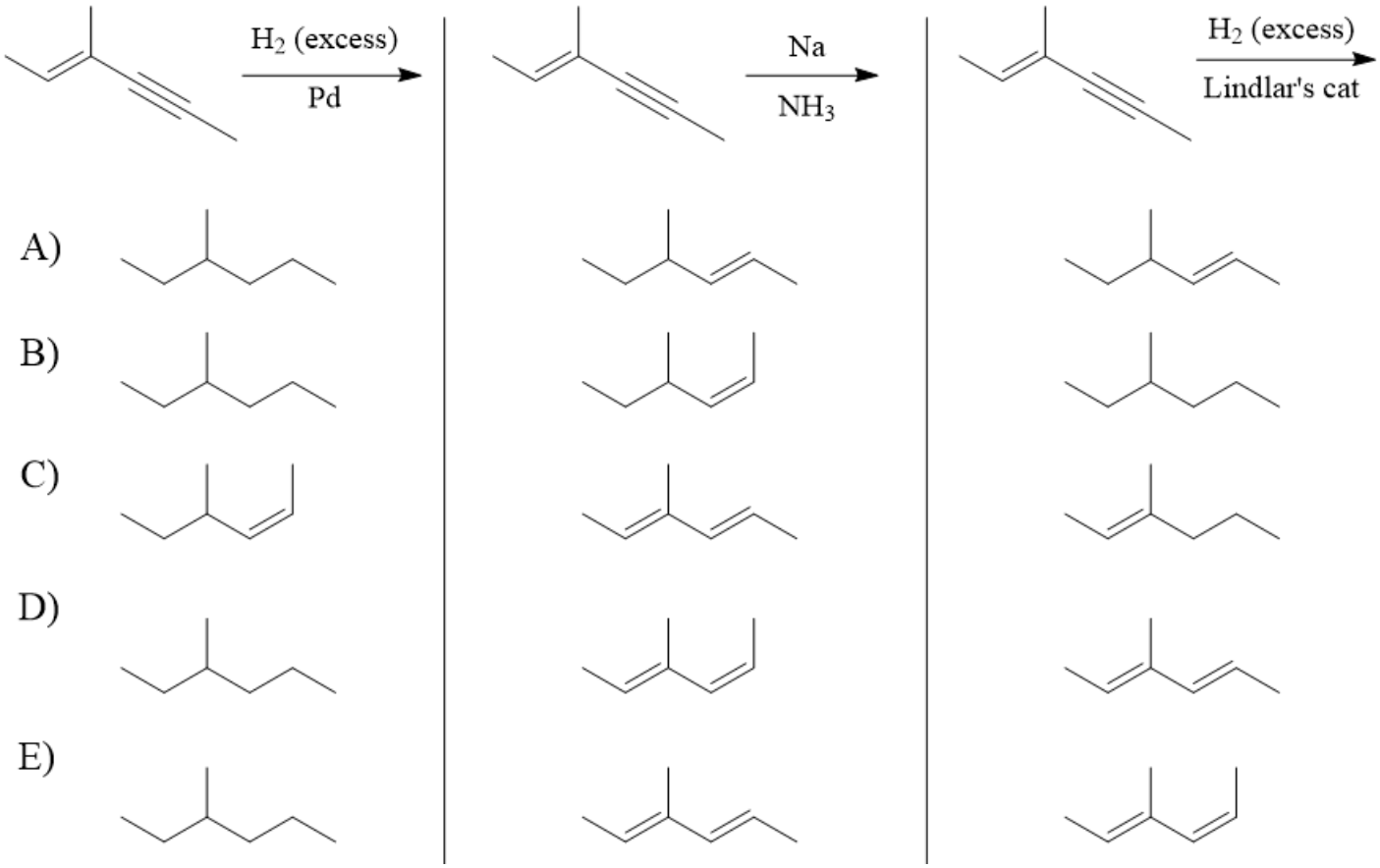
(racemic)

7 Which of the following is the major product of the reaction shown below?

$CH_3CH_2C{\equiv}CH + NaNH_2 \longrightarrow$

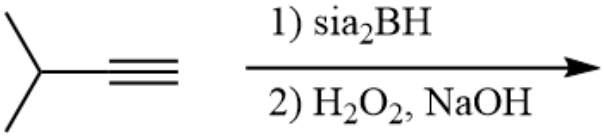
Predict the major products for the following reactions.

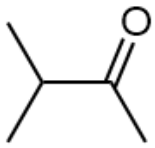
1

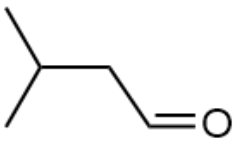


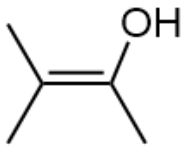
3

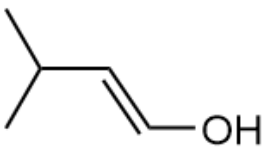
Predict the major product.

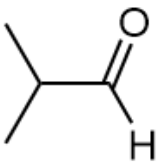


A) 

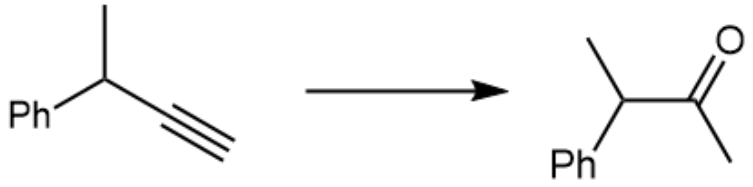
B) 

C) 

D) 

E) 

4 Which is the best set of reagents to accomplish the following transformation?



A) 1) H_2, Lindlar's cat.
2) H_2SO_4, H_2O
$HgSO_4$

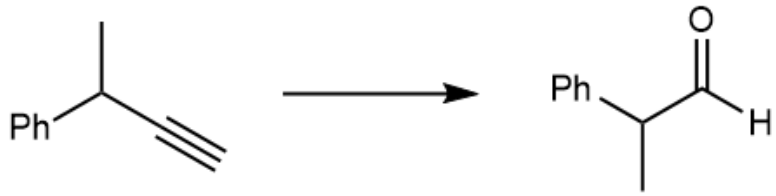
B) 1) H_2, Lindlar's cat.
2) 9-BBN
3) H_2O_2, NaOH

C) 1) 9-BBN
2) H_2O_2, NaOH

D) H_2SO_4, H_2O
$HgSO_4$

E) 1) H_2, Lindlar's cat.
2) O_3
3) DMS

5 Which is the best set of reagents to accomplish the following transformation?



A) 1) H_2, Lindlar's cat.
2) H_2SO_4, H_2O
$HgSO_4$

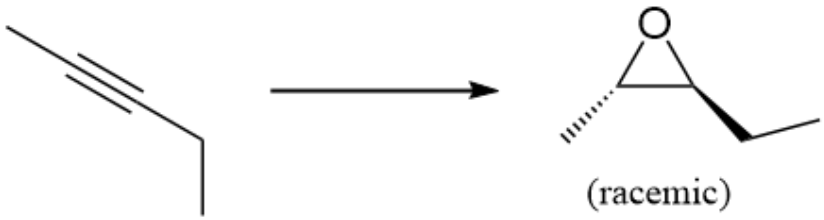
B) 1) H_2, Lindlar's cat.
2) 9-BBN
3) H_2O_2, NaOH

C) 1) 9-BBN
2) H_2O_2, NaOH

D) H_2SO_4, H_2O
$HgSO_4$

E) 1) H_2, Lindlar's cat.
2) O_3
3) DMS

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



(racemic)

A) 1) Na, NH_3
2) cat. OsO_4, NMO

B) 1) H_2, Lindlar's cat.
2) MCPBA

C) 1) H_2, Lindlar's cat.
2) cat. OsO_4, NMO

D) 1) Na, NH_3
2) RCO_3H

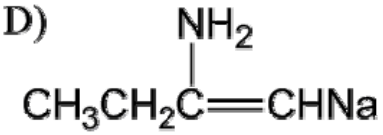
7 *(from the Chemistry GRE practice test)*

Which of the following is the major product of the reaction shown below?

A) $NaCH_2CH_2C{\equiv}CH$

B) $CH_3CH_2C{\equiv}CNH_2$

C) $CH_3CH_2C{\equiv}CNa$

D) 

E)