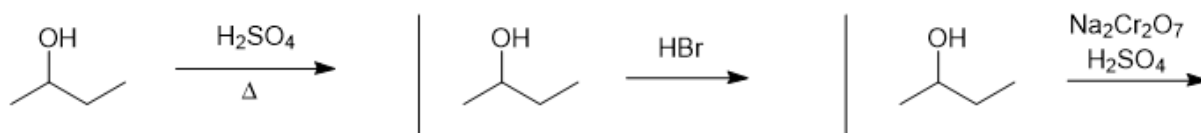




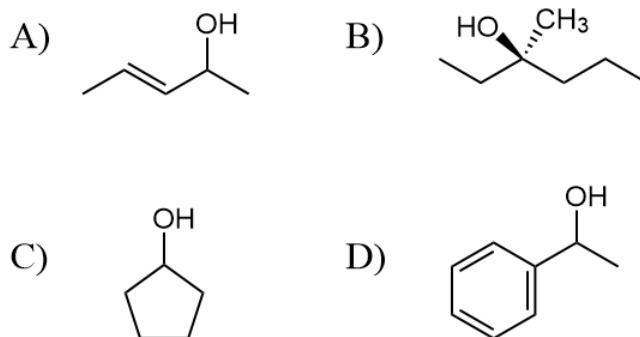
1 Predict the major products for the following reactions.



2

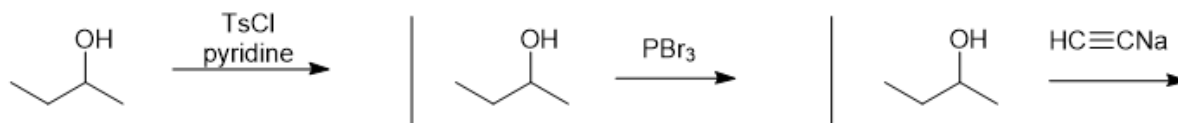
& Explain

Which would undergo the **SLOWEST** dehydration mechanism?



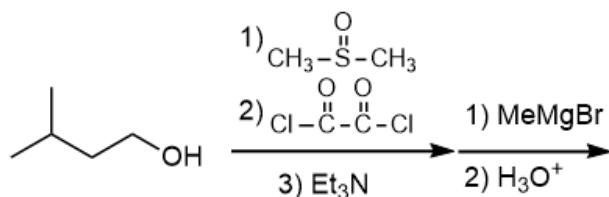
E) None of the above (can't predict)

3 Predict the major products for the following reactions.

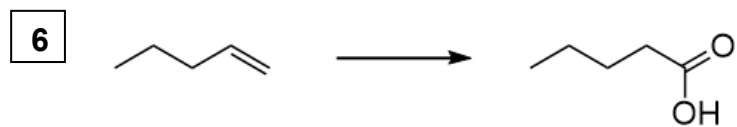
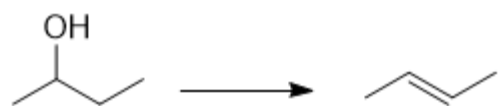
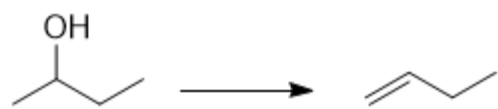


4

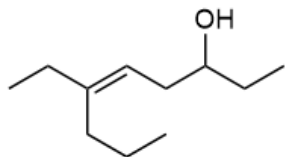
Predict the major product.



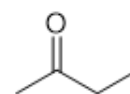
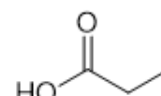
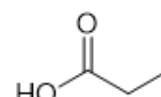
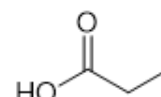
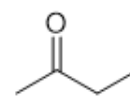
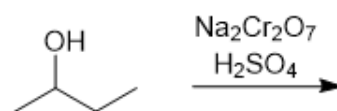
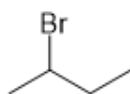
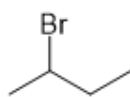
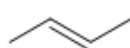
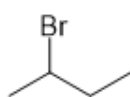
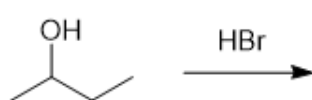
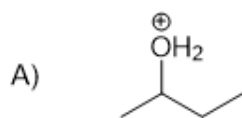
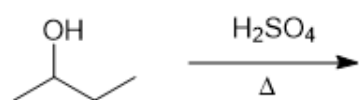
5 Which reagents would be best to achieve the following synthesis?



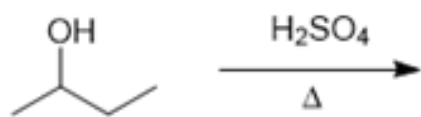
7 Provide the IUPAC name for the following compound.



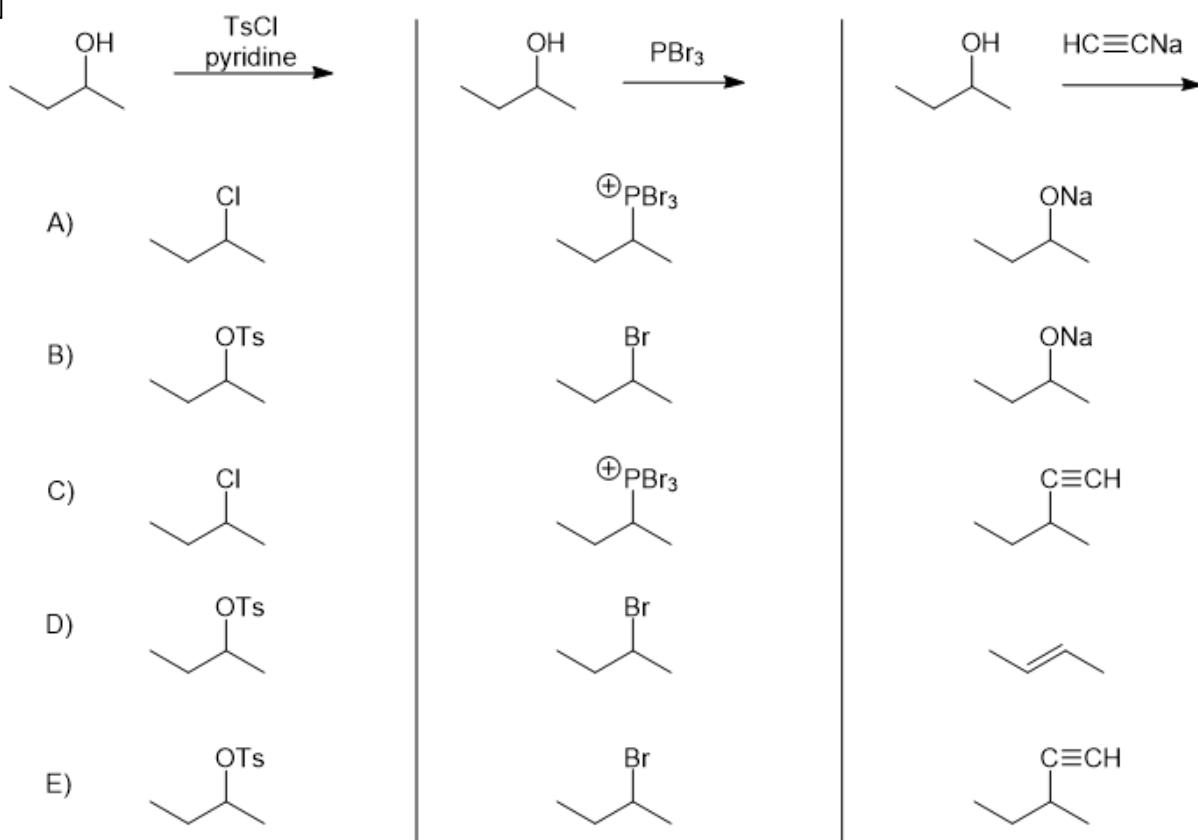
1 Predict the major products for the following reactions.



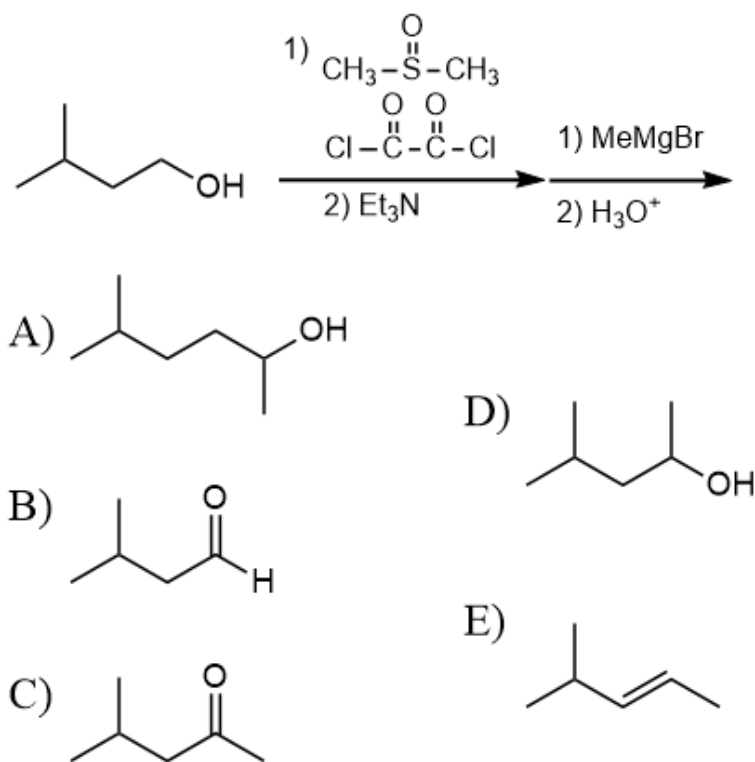
1 – mechanism?



3 Predict the major products for the following reactions.



4 Predict the major product.



5

Which of the given reagents would achieve each of the following syntheses?

I. 1) TsCl, pyridine; 2) NaOEt

II. 1) TsCl, pyridine; 2) *t*-BuOK

III. H<sub>2</sub>SO<sub>4</sub>, heat

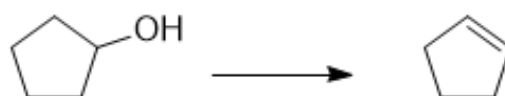
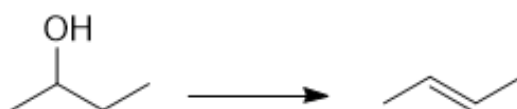
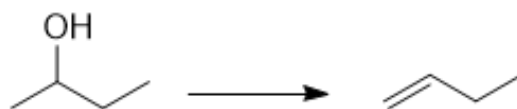
A) I only

B) II only

C) III only

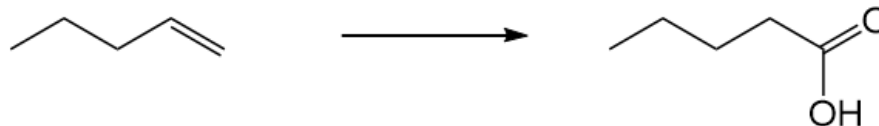
D) I and III

E) I, II and III



6

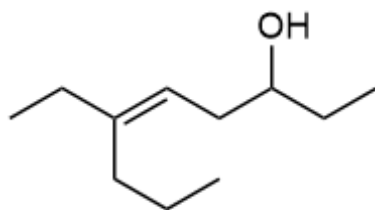
Which reagents would be best to achieve the following synthesis?



- A) 1)  $O_3$   
2)  $Zn, H_2O$
- B) 1)  $O_3$   
2) PCC
- C) 1)  $H_3O^+$   
2)  $Na_2Cr_2O_7, H_2SO_4$
- D) 1)  $Hg(OAc)_2, H_2O$   
2)  $NaBH_4$   
3) PCC
- E) 1)  $BH_3-THF$   
2)  $H_2O_2, NaOH$   
3)  $Na_2Cr_2O_7, H_2SO_4$

7

Provide the IUPAC name for the following compound.



- A) 5-ene-6-propyl-3-octanol
- B) 6-propyloct-5-en-3-ol
- C) 3-propyloct-3-en-6-ol
- D) 6-ethylnon-5-en-3-ol
- E) 5-ene-6-ethyl-3-nonanol
- A) (*E*)
- B) (*Z*)
- C) no stereochem.