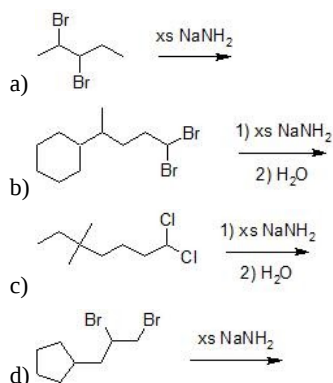


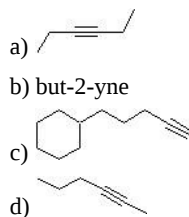
10.11: ADDITIONAL EXERCISES

ALKYNE REACTIONS

10-1 Predict the product of these following reactions:



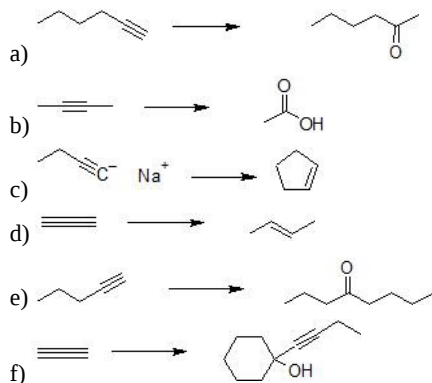
10-2 Using acetylene as the starting material, show how you would synthesize the following compounds



10-3 Identify the reagents needed to turn hex-1-yne into the following compounds

- hexane
- oct-3-yne
- cis*-hept-2-ene
- trans*-hept-2-ene
- 2,2-dibromohexane
- 1-bromohexene

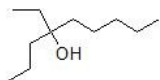
10-4 Show how you would accomplish the following synthetic transformations.



10-5 Deduce the structure of each unknown from the information given.

- Upon catalytic hydrogenation, unknown **A** yields pentane. Ozonolysis of **A** yields butanoic acid, $\text{HOOC}(\text{CH}_2)_2\text{CH}_3$ and CO_2 . Draw the structure of compound **A**
- Upon catalytic hydrogenation, unknown **B** yields pentane. Ozonolysis of **B** yields acetaldehyde, CH_3CHO , and propionaldehyde, $\text{CH}_3\text{CH}_2\text{CHO}$.

10-6 Use compound **A** from the previous problem (10-5) and any additional reagents you may need to synthesize the following compound.



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