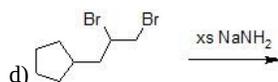
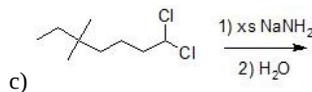
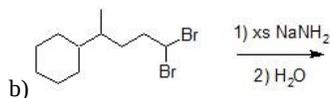
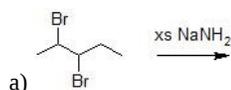


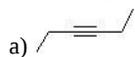
10.11: ADDITIONAL EXERCISES

ALKYNE REACTIONS

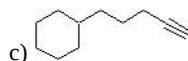
10-1 Predict the product of these following reactions:



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



b) but-2-yne



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

a) hexane

b) oct-3-yne

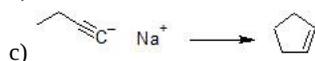
c) *cis*-hept-2-ene

d) *trans*-hept-2-ene

e) 2,2-dibromohexane

f) 1-bromohexene

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

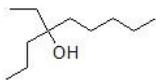


10-5 Deduce the structure of each unknown from the information given.

a) 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**

b) 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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