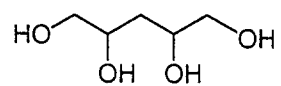


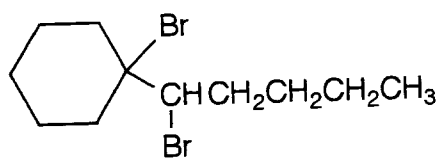
E. Synthesis. (10 pts.)

From propane, ethyne, and any inorganic reagents, synthesize the compound below.



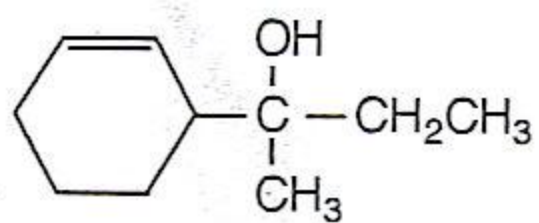
E. Synthesis: 10 Points

From cyclohexane, any alkanes, alkenes or alkynes of **two** carbons or less, and any inorganic reagents, synthesize the compound below.



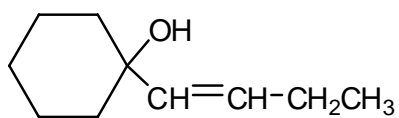
E. Synthesis: 11 Points

From cyclohexane, any alkanes or alkenes (remember, carbon and hydrogen only!) of three carbons or less, and any inorganic reagents, synthesize the compound below.



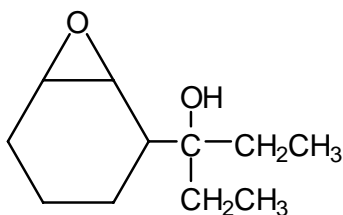
E. Synthesis: (11 points)

Synthesize the molecule below using any of the following reagents: cyclohexene, and alkanes, alkenes, or alkynes of no more than **two carbons**, any inorganic reagents, and any oxidizing or reducing agents.



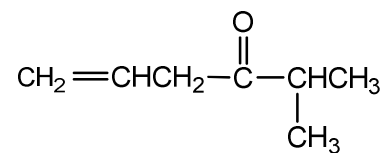
E. Synthesis: 12 Points

Synthesize the molecule below using any of the following reagents: alkanes or alkenes of **three carbons or less**, cyclohexane, any inorganic reagents, any oxidizing or reducing agents, and any peroxyacids.



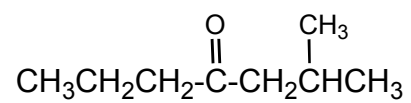
E. Synthesis: 12 Points

Synthesize the molecule below using any of the following reagents: alkanes or alcohols of **three carbons or less**, any inorganic reagents, any oxidizing or reducing agents.



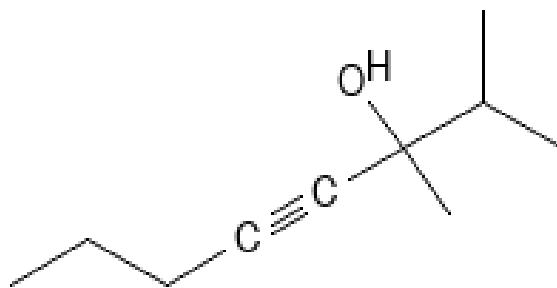
E. Synthesis (12 points)

Synthesize the molecule below from alkanes or alkenes of **three** carbons or less and any inorganic reagents. (Please do not include mechanisms!)



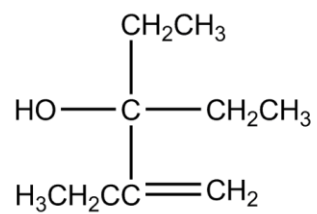
E. Synthesis: 12 Points

Synthesize the molecule below from alkanes, alkynes, or alcohols of **three** carbons or less and any inorganic reagents (Please do not include mechanisms.)



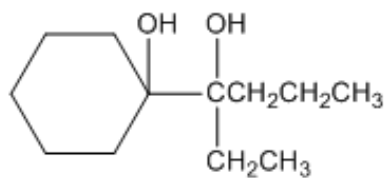
E. Synthesis: (12 points)

Synthesize the molecule below from cyclohexane, any alkenes, or alcohols of **three** carbons or less, and any inorganic reagents. (Please do not include mechanisms)



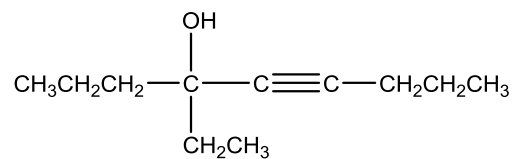
E. Synthesis: (12 points)

Synthesize the molecule below from cyclohexane, any alkenes, or alcohols of **three** carbons or less, and any inorganic reagents. (Please do not include mechanisms)



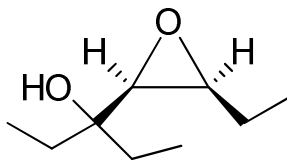
E. Synthesis: 13 points

Synthesize the molecule below from alkanes, alkynes, or alcohols of **three** carbons or less, and any inorganic reagents. (Please do not include mechanisms.)



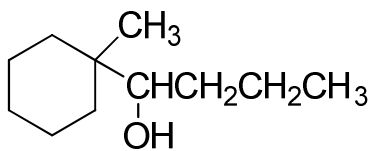
E. Synthesis: (13 Points)

Synthesize the molecule below from alkenes, alkynes, or alcohols of **three** carbons or less, any oxidizing or reducing agents, peroxyacids, and any other inorganic reagents. (Please do not include mechanisms.)



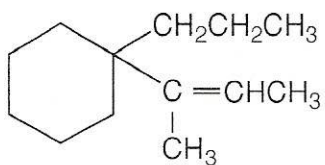
E. Synthesis: (12 points)

Synthesize the molecule below from cyclohexanol and alkanes or alcohols of **two** carbons or less, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)



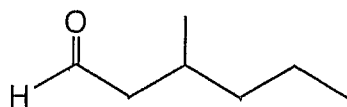
E. Synthesis: (12 points)

Synthesize the molecule below from cyclohexanol and alcohols of **four** carbons or less, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)



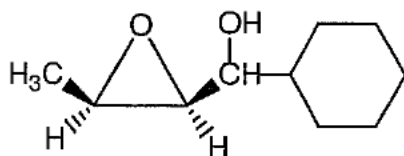
E. Synthesis: (12 points)

Synthesize the molecule below from **alcohols** or **alkenes** of **three** carbons or less, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)



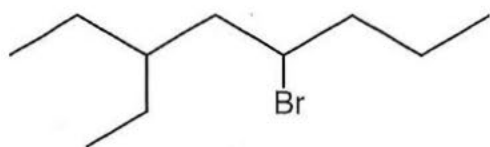
E. Synthesis: (12 points)

Synthesize the molecule below from **cyclohexanol** and alcohols or alkynes of **three** carbons or less, any peroxyacids, any oxidizing or reducing agents, and any other inorganic reagents. The **stereochemistry** of the final product is important. (Please do not include mechanisms.)



E. Synthesis: (12 points)

Synthesize the molecule below from alcohols of **five** carbons or less, any peroxyacids, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)



E. Synthesis: (12 points)

Synthesize the molecule below from **cyclohexane**, **alcohols of four carbons or less**, any oxidizing or reducing agents, and any other inorganic reagents. (Please do not include mechanisms.)

