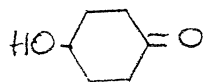


3.

A novice chemist wishes to prepare 1-methyl-1,4-cyclohexanediol from the compound shown below. He wishes to use an appropriate Grignard reagent in the synthesis. Was the chemist successful? Explain why or why not.



4.

Synthesize the following compounds using the indicated starting materials.

A. Show **two** ways to prepare 3-methyl-3-hexanol using a Grignard reagent and a carbonyl (C=O) compound.

