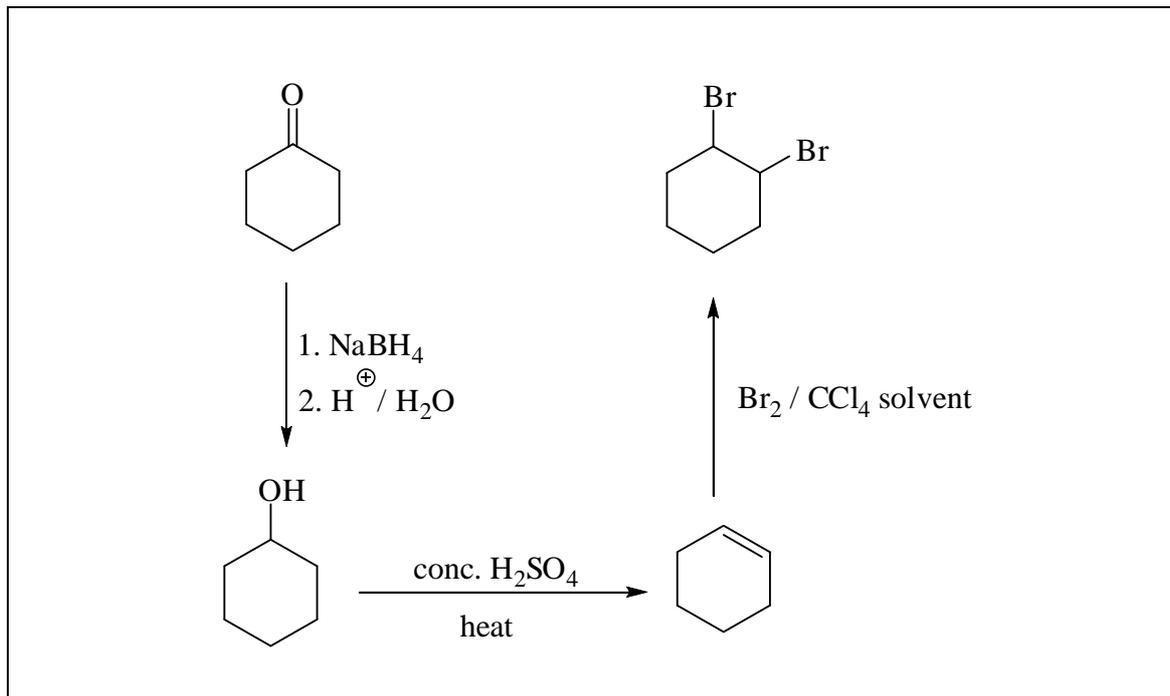


- Devise a synthesis of 1,2-dibromocyclohexane from cyclohexanone. Note that more than one step is required and you should indicate all necessary steps and the constitutional formulas of any intermediate compounds.

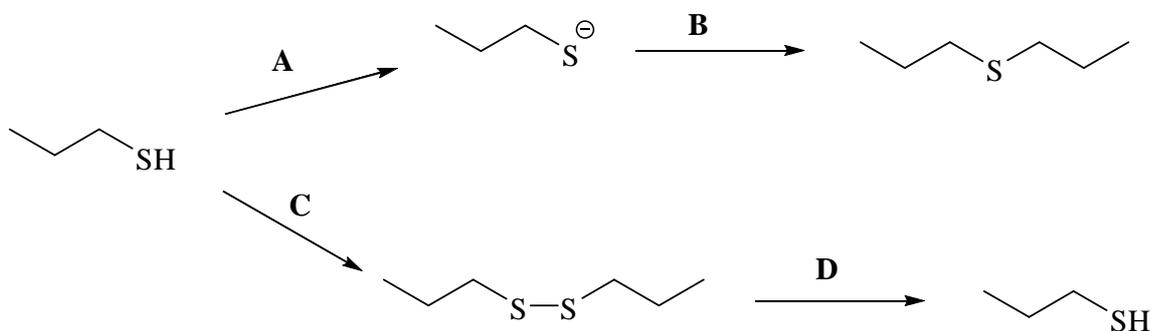
Marks

3



- Indicate the reagents used in the laboratory to undertake the following transformations.

4

A: **NaOH** (deprotonation of RSH by strong base)B: **CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>Br** (nucleophilic attack by RS<sup>-</sup> with substitution of Br<sup>-</sup>)C: **I<sub>2</sub>** (formation of disulfide bridge by oxidation)

Provide a description for transformation B.

**nucleophilic substitution**

Provide a description for transformation D.

**reduction**