



1 Complete the table below.

(2)

Displayed structure		
Name	2-bromo-3,3-dimethylbutanal	2-methylpentan-3-one

2 a Write a balanced equation for each of the following reactions.

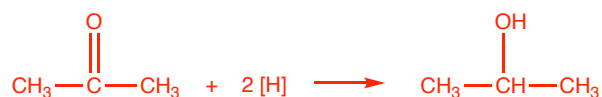
i propanal + Tollen's reagent

(2)



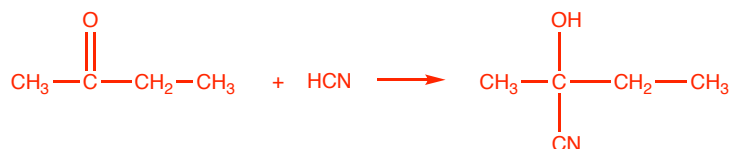
ii propanone + NaBH₄

(2)



iii butanone + acidified KCN

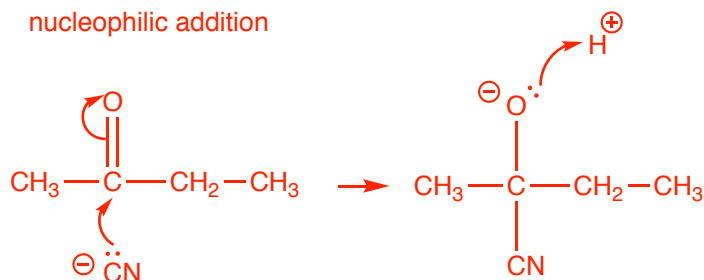
(2)



b i Name and outline the mechanism for reaction iii.

(5)

nucleophilic addition



ii Explain why the product of reaction iii is optically inactive.

C=O group is planar
equal chance of attack from above and below plane
produce a racemic mixture of enantiomers

(3)