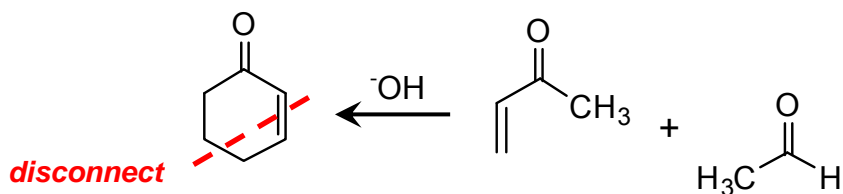
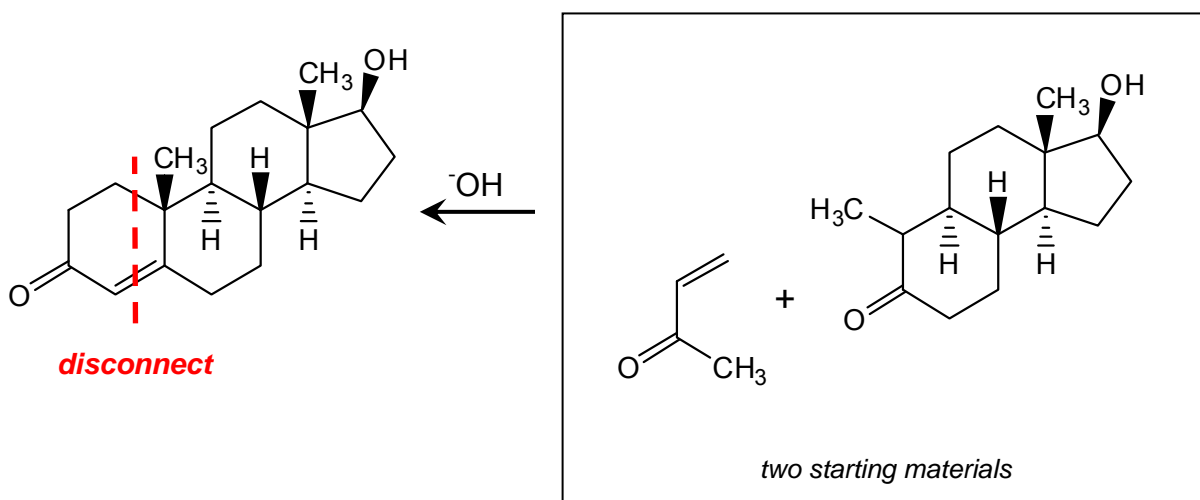


**At-Home Exercise Solutions:
The Robinson Annulation in Steroid Synthesis**

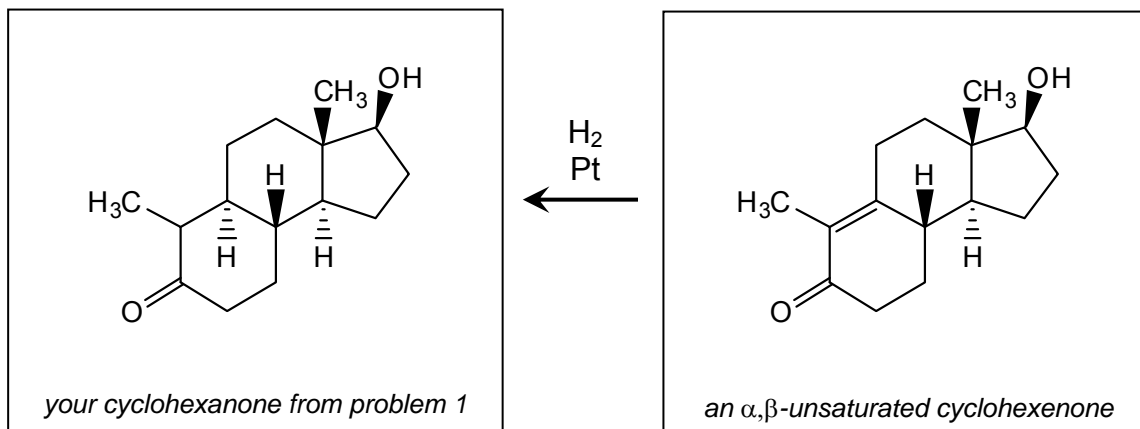
1. The retrosynthetic “disconnect” for the Robinson annulations runs through the double bond and a single bond of the cyclohexenone:

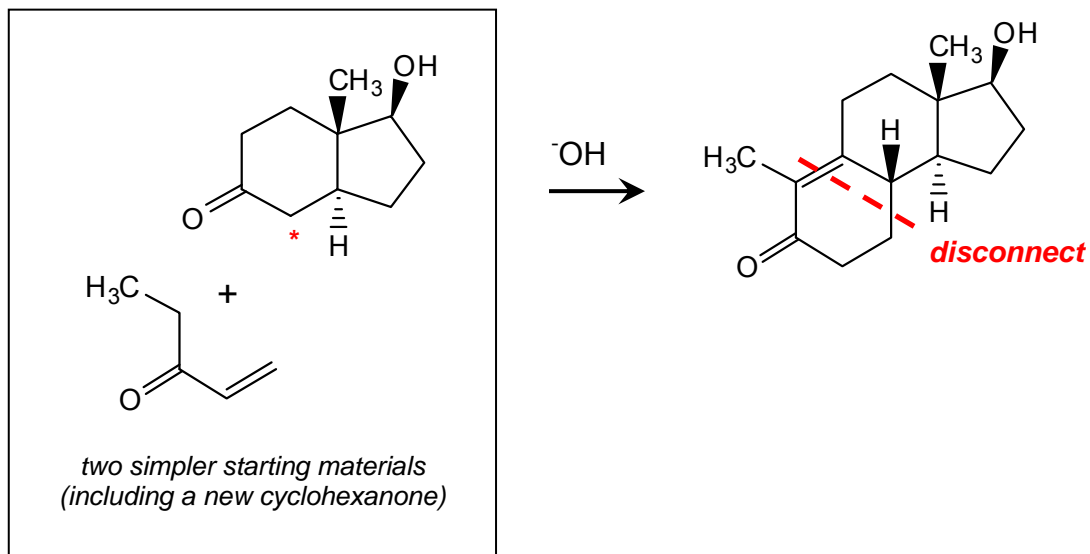


We can apply the same disconnect to testosterone:



- 2.





There's actually a little problem with this disconnect; how do we know the bicyclic ketone will form an enolate at the carbon below the ketone (marked with an asterisk) instead of at the carbon above it? Both carbons are secondary, so in principle both could deprotonate, but only the asterisked carbon would yield the correct product.

3.

